

Table D-1. Summary of laboratories and methods used to generate the surface-water, pore-water and whole-sediment chemistry data for the Calcasieu Estuary Remedial Investigation (RI).

Sample Matrix	Phase of RI	Laboratory	Analyte Group	Analytical Method
Surface Water	I	Contract Laboratory Program	Metals	CLP-METALS; SW7470A
			PAHs	CLP-SVOC
			PCBs	CLP-PPCB
			Pesticides	CLP-PPCB
			Semivolatiles	CLP-SVOC; CLP-VOC
			Volatiles	CLP-VOC
	Olin	Olin	Conventional	E130.2; E160.1; E160.2; E300; E310.1; E350.3; E351.3; E405.1; E410.4; SW9060
			Diesel Range Organics	SW8015B
			Herbicides	SW8151A
			Metals	E6020; SW6010B; SW7470A
			PAHs	SW8260B; SW8270C
			PCBs	SW8082
			Pesticides	SW8081A
			Semivolatiles	SW8260B; SW8270C
			Volatiles	SW8260B
	Quanterra - Severn Trent	Quanterra - Severn Trent	Conventional	E130.2; E160.1; E160.2; E310.1; E350.1; E351.2; E353.2; E405.1; E410.4; EPA300.0A; SW9060
			PCDDs/PCDFs	SW8290
			Herbicides	SW8151A
			Metals	SW6010B; SW6020; SW7470A; SW9012
Pore Water	II	AATS	PAHs	8270C-SIM, SW8270C
			PCB - Aroclors	SW8081A; SW8082
			Pesticides	SW8081A
			Semivolatiles	8270C-SIM; SW8270C
	CERC	CERC	Conventional	E130.2; E310.1; E350.2; SW9045C
			Metals	Total Recoverable Metals

Table D-1. Summary of laboratories and methods used to generate the surface-water, pore-water and whole-sediment chemistry data for the Calcasieu Estuary Remedial Investigation (RI).

Sample Matrix	Phase of RI	Laboratory	Analyte Group	Analytical Method
Pore Water II (cont.)		GERG - Texas A&M	PAHs PCB Congeners Pesticides Semivolatiles	GCMS GCECD GCECD GCECD
		MERC	Conventional	EPA 0015; EPA 9060
Whole Sediment	I	Contract Laboratory Program	Conventional Metals PAHs PCBs Pesticides Semivolatiles Volatile	CLP-%MoistSVOC CLP-Metals CLP-SVOC CLP-PPCB CLP-PPCB CLP-SVOC; CLP-VOC CLP-VOC
		Olin	Conventional Diesel Range Organics Herbicides Metals PAHs PCBs Pesticides Semivolatiles Volatile	ASD 2216-90; SW9045C; SW9060 SW8015B SW8151A E6020; SW6010B; SW7471A SW8260B; SW8270C SW8082 SW8081A SW8260B; SW8270C SW8260B
		Quanterra - Severn Trent	Conventional Diesel Range Organics PCDDs/PCDFs Herbicides	ASTM D 2216-9; SW9045C; SW9060; SW9081 SW8015B; VPH SW8290 SW8151A

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Sample Matrix	Phase of RI	Laboratory	Analyte Group	Analytical Method
Whole Sediment I (cont.)			Metals	SW6020
			PAHs	HOU-SVOC; SW8270C
			Semivolatiles	HOU-SVOC; SW8270C
Whole Sediment	II	AATS	Metals	SW6010B; SW7471A
			PAHs	SW8270C
			PCBs	SW8082
			Pesticides	SW8081A
			Semivolatiles	SW8270C
	ALTA		PCDDs/PCDFs	SW8290
			PCBs	SW1668
	CERC		AVS/SEM	AVS/SEM
			Conventionals	EPA 9060
			Metals	ICP-MS
	EPA Region 6		Metals	200.7; 200.9; SW7471A
			PAHs	SW8270C
			PCBs	SW8082
			Pesticides	SW8081A
			Semivolatiles	SW8270C
	Texas A&M	Mercury; Methyl mercury	SW7470A; SW7471B; USGS 005	

PAHs = polycyclic aromatic hydrocarbons; PCBs = polychlorinated biphenyls; AVS = acid volatile sulfides; SEM = simultaneously extracted metals; PCDDs = polychlorinated dibenzo-*p*-dioxins; PCDFs = polychlorinated dibenzofurans; GERG = Geochemical and Environmental Research Group; CERC = Columbia Environmental Research Center; EPA = Environmental Protection Agency; AATS = American Analytical and Technical Services Inc.; MERC = Marine Environmental Research Center; ALTA = ALTA Laboratories.

Table D-2. Summary of the benchmarks for assessing surface-water and pore-water chemistry relative to the potential for adverse effects on the aquatic plant community.

Chemicals of Potential Concern (COPCs)	Selected Benchmarks	Type	Source
<i>Conventionals (mg/L)</i>			
Hydrogen sulfide	0.002	CCC - salt water	USEPA 1999
Total Ammonia	2.4	LCV for Aquatic Plants - FW	Suter and Tsao 1996
<i>Metals (µg/L)</i>			
Chromium	397	LCV for Aquatic Plants - FW	Suter and Tsao 1996
Copper	1	LCV for Aquatic Plants - FW	Suter and Tsao 1996
Lead	500	LCV for Aquatic Plants - FW	Suter and Tsao 1996
Mercury	5	LCV for Aquatic Plants - FW	Suter and Tsao 1996
Methyl mercury	0.8	LCV for Aquatic Plants - FW	Suter and Tsao 1996
Nickel	5	LCV for Aquatic Plants - FW	Suter and Tsao 1996
Zinc	30	LCV for Aquatic Plants - FW	Suter and Tsao 1996
<i>Polycyclic Aromatic Hydrocarbons (µg/L)</i>			
1,1'-Biphenyl	14	Tier II SCV - FW	Suter and Tsao 1996
1-Methylnaphthalene	21	Tier II SCV - FW	Suter and Tsao 1996
1-Methylphenanthrene	NG		
2,6-Dimethylnaphthalene	NG		
2-Methylnaphthalene	4.2	Aquatic Chronic GV - salt water	NYSDEC 1998
Acenaphthene	520	LCV for Aquatic Plants - FW	Suter and Tsao 1996
Acenaphthylene	NG		
Anthracene	0.73	Tier II SCV - FW	Suter and Tsao 1996
Fluorene	3.9	Tier II SCV - FW	Suter and Tsao 1996
Naphthalene	33000	LCV for Aquatic Plants - FW	Suter and Tsao 1996
Phenanthrene	8.3	Ecotox Threshold	USEPA 1996
Benz(a)anthracene	0.027	Tier II SCV - FW	Suter and Tsao 1996
Benzo(a)pyrene	0.014	Tier II SCV - FW	Suter and Tsao 1996
Benzo(b)fluoranthene	60	MAC divided by 5	NHDES 1996 ¹
Benzo(g,h,i)perylene	60	MAC divided by 5	NHDES 1996 ¹
Benzo(k)fluoranthene	60	MAC divided by 5	NHDES 1996 ¹
Chrysene	60	MAC divided by 5	NHDES 1996 ¹
Dibenz(a,h)anthracene	60	MAC divided by 5	NHDES 1996 ¹
Fluoranthene	54400	LCV for Aquatic Plants - FW	Suter and Tsao 1996
Indeno(1,2,3-cd)pyrene	60	MAC divided by 5	NHDES 1996 ¹
Perylene	NG		
Pyrene	60	MAC divided by 5	NHDES 1996 ¹
<i>PCB Aroclors (µg/L)</i>			
Aroclor-1016	0.03	CC - salt water	NHDES 1996
Aroclor-1221	0.28	Tier II SCV - FW	Suter and Tsao 1996

Table D-2. Summary of the benchmarks for assessing surface-water and pore-water chemistry relative to the potential for adverse effects on the aquatic plant community.

Chemicals of Potential Concern (COPCs)	Selected Benchmarks	Type	Source
<i>PCB Aroclors (µg/L; cont.)</i>			
Aroclor-1232	0.58	Tier II SCV - FW	Suter and Tsao 1996
Aroclor-1242	300	LCV for Aquatic Plants - FW	Suter and Tsao 1996
Aroclor-1248	0.081	Tier II SCV - FW	Suter and Tsao 1996
Aroclor-1254	0.1	LCV for Aquatic Plants - FW	Suter and Tsao 1996
Aroclor-1260	94	Tier II SCV - FW	Suter and Tsao 1996
Total PCBs	0.144	LCV for Aquatic Plants - FW	Suter and Tsao 1996
<i>Organochlorine Pesticides (µg/L)</i>			
Aldrin	0.26	CMC divided by 5 - salt water	USEPA 1999
Dieldrin	0.11	Ecotox Threshold	USEPA 1996
<i>Phthalates (µg/L)</i>			
Bis(2-ethylhexyl)phthalate	3.0	Tier II SCV - FW	Suter and Tsao 1996
<i>Chlorinated Benzenes (µg/L)</i>			
Hexachloro-1,3-butadiene	0.32	CC - salt water	LDEQ 2000
Hexachlorobenzene	129	CC - salt water	NHDES 1996 ¹
1,2,3,4-Tetrachlorobenzene	NG		
1,2,3-Trichlorobenzene	5	Aquatic Chronic SV - salt water	NYSDEC 1998 ¹
1,2,4,5-Tetrachlorobenzene	129	CC - salt water	NHDES 1996 ¹
1,2,4-Trichlorobenzene	5	Aquatic Chronic SV - salt water	NYSDEC 1998 ¹
1,2-Dichlorobenzene	5	Aquatic Chronic SV - salt water	NYSDEC 1998 ¹
1,3-Dichlorobenzene	5	Aquatic Chronic SV - salt water	NYSDEC 1998 ¹
1,4-Dichlorobenzene	5	Aquatic Chronic SV - salt water	NYSDEC 1998 ¹
Pentachlorobenzene	129	CC - salt water	NHDES 1996 ¹
<i>Chlorinated Ethanes (µg/L)</i>			
1,1,1-Trichloroethane	1560	CC - salt water	LDEQ 2000
1,2-Dichloroethane	5650	CC - salt water	LDEQ 2000
<i>Other COPCs (µg/L)</i>			
Acetone	1500	Tier II SCV - FW	Suter and Tsao 1996
Carbon disulfide	0.92	Tier II SCV - FW	Suter and Tsao 1996

CCC = Criteria Continuous Concentration; CC = Chronic Criteria; FW = freshwater; GV = Guidance Value; SV = Standard Value; MAC = Marine Acute Criteria; NG = no guideline available; PCBs = polychlorinated biphenyls; LCV = Lowest Chronic Value; SCV = Secondary Chronic.

¹Benchmarks apply to the total for the whole class of compounds (i.e., chlorinated benzenes or PAHs).

Table D-3. Classifications for assessing risks to aquatic plants.

Species/Category	Endpoint Measured	Test Duration	Reference Envelope		Low Risk Threshold		Indeterminate Risk Threshold		High Risk Threshold	
			Observed	Predicted	% Response	mean PEC-Q	% Response	mean PEC-Q	% Response	mean PEC-Q
<i>Ulva fasciata</i>										
Observed Incidence of Toxicity	Ge or G	96-hour	14%	NA	<31.2%	NA	31.2 to 57.0%	NA	>57.0%	NA
Observed Magnitude of Toxicity	Ge	96-hour	66.7%	NA	>60.0%	NA	53.4 to 60.0%	NA	<53.4%	NA
Predicted PW Incidence of Toxicity (conventionals only)	NA	NA	NA	21%	<36.8%	NA	36.8 to 60.5%	NA	>60.5%	NA
Predicted PW Incidence of Toxicity (metals only)	NA	NA	NA	100%	0 to 100%	NA	NA	NA	NA	NA
Predicted PW Incidence of Toxicity (organics only)	NA	NA	NA	0%	<20%	NA	20 to 50%	NA	>50%	NA
Predicted SW Incidence of Toxicity (full chemistry)	NA	NA	NA	100%	0 to 100%	NA	NA	NA	NA	NA
Predicted SW Incidence of Toxicity (conventionals only)	NA	NA	NA	0%	<20%	NA	20 to 50%	NA	>50%	NA
Predicted SW Incidence of Toxicity (metals only)	NA	NA	NA	100%	0 to 100%	NA	NA	NA	NA	NA
Predicted SW Incidence of Toxicity (organics only)	NA	NA	NA	0%	<20%	NA	20 to 50%	NA	>50%	NA

Ge = zoospore germination; G = growth (length or cell number); NA = not applicable; PEC-Q = probable effect concentration-quotient; PW = pore water; SW = surface water.

Table D-4. Summary of the surface-water chemistry for Upper Calcasieu River Area of Concern (UCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
Conventionals (mg/L)															
Hydrogen sulfide	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrogen, as ammonia	4	4	0	0.22	0.23	0.28	0.37	0.44	0.46	0.472	0.35	0.10	0.34	0.2	0.48
Total dissolved sulfide	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia - toxic units (no units)	2	2	0	0.12	0.13	0.13	0.14	0.16	0.16	0.164	0.14	0.03	0.14	0.123	0.166
Metals (µg/L)															
Chromium, total	12	0	12	0.50	0.50	0.50	1.15	2.70	2.70	2.70	1.29	0.47	1.16	0.5	2.7
Chromium, dissolved	12	0	12	0.50	0.50	0.65	1.15	2.70	2.70	2.70	1.31	0.46	1.19	0.5	2.7
Copper, total	12	7	5	1.25	1.25	1.25	4.15	7.35	7.50	7.54	3.50	0.87	3.24	1.25	7.6
Copper, dissolved	12	6	6	1.25	1.26	1.46	2.47	6.00	6.09	6.77	3.02	0.73	2.83	1.25	7.6
Lead, total	12	4	8	0.45	0.71	0.88	1.05	2.02	4.50	14.1	1.78	1.33	1.41	0.15	25.9
Lead, dissolved	12	1	11	0.15	0.15	0.15	1.05	3.50	3.50	5.70	1.34	1.00	0.88	0.15	8.4
Mercury, total	12	0	12	0.05	0.05	0.05	0.05	0.08	0.08	0.0800	0.06	0.01	0.06	0.05	0.08
Mercury, dissolved	12	0	12	0.05	0.05	0.05	0.05	0.08	0.08	0.0800	0.06	0.01	0.06	0.05	0.08
Methyl mercury	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, total	12	5	7	1.05	1.05	1.91	5.70	17.60	17.60	17.6	5.58	1.46	5.01	1.05	17.6
Nickel, dissolved	12	4	8	1.05	1.05	1.05	3.95	17.60	17.60	17.6	4.73	1.58	4.18	1.05	17.6
Zinc, total	12	0	12	1.02	1.27	1.95	2.15	4.90	4.90	5.33	2.77	0.57	2.63	0.8	5.85
Zinc, dissolved	12	6	6	0.80	0.80	3.72	4.90	12.82	23.40	24.9	5.79	1.65	5.07	0.8	26

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Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)															
1,1'-Biphenyl	8	0	8	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
1-Methylnaphthalene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	4	0	4	0.70	0.70	0.70	0.70	0.70	0.70	0.700	0.70	0	0.70	0.7	0.7
Acenaphthene	12	0	12	0.75	0.75	0.75	5.00	5.00	5.00	5.00	2.98	0.83	2.66	0.75	5
Acenaphthylene	12	0	12	1.00	1.00	1.00	5.00	5.00	5.00	5.00	3.16	0.72	2.92	1	5
Anthracene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	4	0	4	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	0	1.10	1.1	1.1
Naphthalene	12	0	12	0.55	0.55	0.55	5.00	5.00	5.00	5.00	2.82	0.95	2.40	0.55	5
Phenanthrene	4	0	4	0.70	0.70	0.70	0.70	0.70	0.70	0.700	0.70	0	0.70	0.7	0.7
Benz(a)anthracene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	12	0	12	0.50	0.50	0.50	5.00	5.00	5.00	5.00	2.78	0.98	2.32	0.5	5
Benzo(g,h,i)perylene	12	0	12	0.36	0.36	0.36	5.00	5.00	5.00	5.00	2.66	1.07	2.09	0.365	5
Benzo(k)fluoranthene	12	0	12	0.65	0.65	0.65	5.00	5.00	5.00	5.00	2.90	0.89	2.53	0.65	5
Chrysene	12	0	12	0.50	0.50	0.50	5.00	5.00	5.00	5.00	2.78	0.98	2.32	0.5	5
Dibenz(a,h)anthracene	12	0	12	0.41	0.41	0.41	5.00	5.00	5.00	5.00	2.71	1.04	2.18	0.415	5
Fluoranthene	12	0	12	0.32	0.32	0.32	5.00	5.00	5.00	5.00	2.63	1.10	2.01	0.325	5
Indeno(1,2,3-cd)pyrene	12	0	12	0.32	0.32	0.32	5.00	5.00	5.00	5.00	2.62	1.11	2.00	0.32	5
Perylene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	12	0	12	0.29	0.29	0.29	5.00	5.00	5.00	5.00	2.60	1.13	1.95	0.295	5

Table D-4. Summary of the surface-water chemistry for Upper Calcasieu River Area of Concern (UCR AOC).

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PCB Aroclors (µg/L)															
Aroclor-1016	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	4	0	4	0.09	0.09	0.09	0.09	0.09	0.09	0.0950	0.09	0	0.10	0.095	0.095
Aroclor-1232	4	0	4	0.09	0.09	0.09	0.09	0.09	0.09	0.0950	0.09	0	0.10	0.095	0.095
Aroclor-1242	4	0	4	0.09	0.09	0.09	0.09	0.09	0.09	0.0950	0.09	0	0.10	0.095	0.095
Aroclor-1248	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	12	0	12	0.09	0.09	0.09	0.50	0.50	0.50	0.500	0.35	0.17	0.29	0.095	0.5
Total PCBs ⁵	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Organochlorine Pesticides (µg/L)															
Aldrin	12	0	12	0.01	0.01	0.01	0.02	0.02	0.02	0.0250	0.02	0.01	0.02	0.0075	0.025
Dieldrin	12	0	12	0.01	0.01	0.01	0.05	0.05	0.05	0.0500	0.04	0.02	0.03	0.0075	0.05
Phthalates (µg/L)															
Bis(2-ethylhexyl)phthalate	3	3	0	1.08	1.17	1.45	2.00	2.00	2.00	2.00	1.62	0.26	1.59	1	2
Chlorinated Benzenes (µg/L)															
Hexachloro-1,3-butadiene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	12	0	12	0.80	0.80	0.80	5.00	5.00	5.00	5.00	3.02	0.81	2.71	0.8	5
1,2,3,4-Tetrachlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	4	0	4	0.60	0.60	0.60	0.60	0.60	0.60	0.600	0.60	0	0.60	0.6	0.6
1,2,4,5-Tetrachlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	4	0	4	0.60	0.60	0.60	0.60	0.60	0.60	0.600	0.60	0	0.60	0.6	0.6

Table D-4. Summary of the surface-water chemistry for Upper Calcasieu River Area of Concern (UCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
<i>Chlorinated Benzenes (µg/L; cont.)</i>															
1,2-Dichlorobenzene	4	0	4	0.60	0.60	0.60	0.60	0.60	0.60	0.600	0.60	0	0.60	0.6	0.6
1,3-Dichlorobenzene	4	0	4	0.65	0.65	0.65	0.65	0.65	0.65	0.650	0.65	0	0.65	0.65	0.65
1,4-Dichlorobenzene	4	0	4	0.65	0.65	0.65	0.65	0.65	0.65	0.650	0.65	0	0.65	0.65	0.65
Pentachlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Chlorinated Ethanes (µg/L)</i>															
1,1,1-Trichloroethane	12	0	12	0.80	0.80	0.80	5.00	5.00	5.00	5.00	3.02	0.81	2.71	0.8	5
1,2-Dichloroethane	12	0	12	0.65	0.65	0.65	5.00	5.00	5.00	5.00	2.90	0.89	2.53	0.65	5
<i>Other COPCs (µg/L)</i>															
Acetone	8	0	8	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0.00	5.00	5	5
Carbon disulfide	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA = not applicable (was measured but all values were screened out or was not measured in the reach); ND = no data (i.e., the substance was not measured at all in the estuary);

PCBs = polychlorinated biphenyls; DL = detection limit.

¹Excluding results for which the detection limit was greater than the selected chemical benchmark (see methods section for details).

²If the result is <DL, the value of 1/2 the detection limit was assigned.

³The percentiles, arithmetic mean and standard deviation were calculated using log_e transformed data.

⁴The geomean was not calculated using the log_e transformed data.

⁵The concentrations of PCB Aroclors were summed to calculate Total PCBs.

Table D-5. Summary of the surface-water chemistry for Bayou d'Inde Area of Concern (BI AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
Conventionals (mg/L)															
Hydrogen sulfide	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrogen, as ammonia	7	7	0	1.00	1.04	1.20	1.70	2.35	2.97	3.37	1.81	0.37	1.74	0.96	3.8
Total dissolved sulfide	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia - toxic units (no units)	7	7	0	0.24	0.24	0.32	0.54	0.78	0.82	0.825	0.52	0.19	0.48	0.238	0.827
Metals (µg/L)															
Chromium, total	21	13	8	0.50	0.50	1.20	1.80	4.60	23.40	25.0	2.81	1.70	2.29	0.35	45.6
Chromium, dissolved	21	5	16	0.50	0.50	0.50	0.50	2.35	6.60	14.2	1.55	1.34	1.16	0.35	25
Copper, total	21	17	4	2.85	3.00	5.20	7.40	9.80	13.70	16.1	7.24	0.86	7.02	1.5	42.2
Copper, dissolved	21	9	12	1.50	1.50	1.50	2.85	5.60	7.90	22.6	3.47	1.04	3.22	1.5	22.9
Lead, total	21	3	18	1.05	1.05	1.05	1.05	1.05	2.20	2.70	1.27	0.27	1.23	0.9	3.8
Lead, dissolved	21	1	20	0.60	0.60	1.05	1.05	1.05	1.05	1.05	0.94	0.15	0.90	0.16	1.05
Mercury, total	21	7	14	0.05	0.05	0.05	0.05	0.11	0.16	0.170	0.08	0.04	0.07	0.05	0.19
Mercury, dissolved	21	1	20	0.05	0.05	0.05	0.05	0.05	0.05	0.0780	0.05	0.01	0.05	0.05	0.1
Methyl mercury	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, total	21	16	5	1.80	2.20	3.00	4.40	6.00	17.40	25.6	5.65	1.43	5.30	1.05	100
Nickel, dissolved	21	12	9	1.05	1.05	2.20	3.60	5.40	17.40	17.4	4.18	1.59	3.76	1.05	100
Zinc, total	21	3	18	4.90	4.90	4.90	4.90	9.60	16.10	18.2	7.32	0.79	7.18	4.9	50
Zinc, dissolved	21	3	18	4.90	4.90	4.90	4.90	4.90	10.00	11.0	5.64	0.34	5.60	4.9	15.8

Table D-5. Summary of the surface-water chemistry for Bayou d'Inde Area of Concern (BI AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)															
1,1'-Biphenyl	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5
1-Methylnaphthalene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5
Acenaphthylene	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5
Anthracene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5
Phenanthrene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benz(a)anthracene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5
Benzo(g,h,i)perylene	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5
Benzo(k)fluoranthene	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5
Chrysene	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5
Dibenz(a,h)anthracene	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5
Fluoranthene	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5
Indeno(1,2,3-cd)pyrene	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5
Perylene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5

Table D-5. Summary of the surface-water chemistry for Bayou d'Inde Area of Concern (BI AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
PCB Aroclors (µg/L)															
Aroclor-1016	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	1	1	0	0.21	0.21	0.21	0.21	0.21	0.21	0.210	0.21	NA	0.21	0.21	0.21
Aroclor-1260	21	0	21	0.45	0.45	0.47	0.50	0.50	0.50	0.500	0.48	0.01	0.48	0.455	0.5
Total PCBs ⁵	1	1	0	0.66	0.66	0.66	0.66	0.66	0.66	0.665	0.66	NA	0.67	0.665	0.665
Organochlorine Pesticides (µg/L)															
Aldrin	21	1	20	0.02	0.02	0.02	0.02	0.02	0.02	0.0250	0.02	0.005	0.02	0.00395	0.033
Dieldrin	21	0	21	0.05	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0.002	0.05	0.0455	0.05
Phthalates (µg/L)															
Bis(2-ethylhexyl)phthalate	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorinated Benzenes (µg/L)															
Hexachloro-1,3-butadiene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	21	0	21	4.50	4.50	4.65	5.00	5.00	5.00	5.00	4.85	0.04	4.85	4.5	5
1,2,3,4-Tetrachlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4,5-Tetrachlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table D-5. Summary of the surface-water chemistry for Bayou d'Inde Area of Concern (BI AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
<i>Chlorinated Benzenes (µg/L; cont.)</i>															
1,2-Dichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Chlorinated Ethanes (µg/L)</i>															
1,1,1-Trichloroethane	21	0	21	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
1,2-Dichloroethane	21	0	21	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
<i>Other COPCs (µg/L)</i>															
Acetone	21	6	15	5.00	5.00	5.00	5.00	8.50	17.00	20.0	7.29	0.79	7.16	5	55
Carbon disulfide	3	3	0	1.00	1.00	1.00	1.00	1.45	1.77	1.88	1.29	0.26	1.26	1	2

NA = not applicable (was measured but all values were screened out or was not measured in the reach); ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls; DL = detection limit.

¹Excluding results for which the detection limit was greater than the selected chemical benchmark (see methods section for details).

²If the result is <DL, the value of 1/2 the detection limit was assigned.

³The percentiles, arithmetic mean and standard deviation were calculated using log_e transformed data.

⁴The geometric mean was not calculated using the log_e transformed data.

⁵The concentrations of PCB Aroclors were summed to calculate Total PCBs.

Table D-6. Summary of the surface-water chemistry for Middle Calcasieu River Area of Concern (MCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
Conventionals (mg/L)															
Hydrogen sulfide	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrogen, as ammonia	4	4	0	0.33	0.34	0.36	0.40	0.42	0.43	0.437	0.39	0.04	0.39	0.32	0.44
Total dissolved sulfide	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia - toxic units (no units)	4	4	0	0.09	0.10	0.13	0.19	0.28	0.36	0.384	0.21	0.12	0.19	0.0804	0.411
Metals (µg/L)															
Chromium, total	16	0	16	0.35	0.42	0.50	0.50	0.50	1.42	2.15	0.64	0.30	0.59	0.35	2.15
Chromium, dissolved	22	0	22	0.36	0.50	0.50	0.50	2.15	2.15	2.15	0.95	0.45	0.82	0.35	2.2
Copper, total	22	12	10	2.25	2.35	3.26	7.30	7.82	15.47	16.5	6.20	0.93	5.96	1.7	36
Copper, dissolved	22	5	17	1.53	2.16	2.52	2.85	5.19	8.36	9.82	3.95	1.04	3.76	1.5	64.3
Lead, total	22	6	16	0.45	0.47	0.83	1.05	1.05	1.05	1.05	0.87	0.14	0.85	0.44	1.05
Lead, dissolved	22	0	22	0.60	0.60	0.60	1.05	1.05	1.05	1.05	0.86	0.13	0.84	0.6	1.05
Mercury, total	22	0	22	0.05	0.05	0.05	0.05	0.09	0.10	0.100	0.06	0.02	0.06	0.05	0.1
Mercury, dissolved	22	0	22	0.05	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0	0.05	0.05	0.05
Methyl mercury	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, total	22	10	12	1.05	1.05	1.05	2.60	4.27	4.78	16.8	2.66	0.96	2.41	1.05	17.4
Nickel, dissolved	22	2	20	1.05	1.05	1.05	1.05	17.40	17.40	17.4	3.67	1.90	3.04	1.05	17.4
Zinc, total	16	3	13	4.90	4.90	4.90	4.90	4.94	19.45	24.7	6.77	0.83	6.63	4.9	38.5
Zinc, dissolved	22	4	18	4.90	4.90	4.90	4.97	5.05	19.58	27.5	6.97	1.01	6.81	4.9	87.3

Table D-6. Summary of the surface-water chemistry for Middle Calcasieu River Area of Concern (MCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,4}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)															
1,1'-Biphenyl	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
1-Methylnaphthalene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
Acenaphthylene	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
Anthracene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	22	1	21	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.81	0.16	4.80	2	5
Phenanthrene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benz(a)anthracene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
Benzo(g,h,i)perylene	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
Benzo(k)fluoranthene	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
Chrysene	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
Dibenz(a,h)anthracene	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
Fluoranthene	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
Indeno(1,2,3-cd)pyrene	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
Perylene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5

Table D-6. Summary of the surface-water chemistry for Middle Calcasieu River Area of Concern (MCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
PCB Aroclors (µg/L)															
Aroclor-1016	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	22	0	22	0.50	0.50	0.50	0.50	0.50	0.50	0.500	0.50	0.004	0.50	0.475	0.5
Total PCBs ⁵	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Organochlorine Pesticides (µg/L)															
Aldrin	22	0	22	0.02	0.02	0.02	0.02	0.02	0.02	0.0250	0.02	0.0002	0.02	0.024	0.025
Dieldrin	22	0	22	0.05	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0.001	0.05	0.0475	0.05
Phthalates (µg/L)															
Bis(2-ethylhexyl)phthalate	13	13	0	1.00	1.17	2.00	2.00	3.00	3.00	3.70	2.25	0.35	2.19	1	5
Chlorinated Benzenes (µg/L)															
Hexachloro-1,3-butadiene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
1,2,3,4-Tetrachlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4,5-Tetrachlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table D-6. Summary of the surface-water chemistry for Middle Calcasieu River Area of Concern (MCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
<i>Chlorinated Benzenes (µg/L; cont.)</i>															
1,2-Dichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Chlorinated Ethanes (µg/L)</i>															
1,1,1-Trichloroethane	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
1,2-Dichloroethane	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0	5.00	5	5
<i>Other COPCs (µg/L)</i>															
Acetone	22	0	22	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.24	0.20	5.22	5	13
Carbon disulfide	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA = not applicable (was measured but all values were screened out or was not measured in the reach); ND = no data (i.e., the substance was not measured at all in the estuary);

PCBs = polychlorinated biphenyls; DL = detection limit.

¹Excluding results for which the detection limit was greater than the selected chemical benchmark (see methods section for details).

²If the result is <DL, the value of 1/2 the detection limit was assigned.

³The percentiles, arithmetic mean and standard deviation were calculated using log_e transformed data.

⁴The geomean was not calculated using the log_e transformed data.

⁵The concentrations of PCB Aroclors were summed to calculate Total PCBs.

Table D-7. Summary of the surface-water chemistry for the Reference Areas.

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
Conventionals (mg/L)															
Hydrogen sulfide	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrogen, as ammonia	1	1	0	0.33	0.33	0.33	0.33	0.33	0.330	0.33	NA	0.33	0.33	0.33	0.33
Total dissolved sulfide	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia - toxic units (no units)	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)															
Chromium, total	1	0	1	0.35	0.35	0.35	0.35	0.35	0.350	0.35	NA	0.35	0.35	0.35	0.35
Chromium, dissolved	1	0	1	0.35	0.35	0.35	0.35	0.35	0.350	0.35	NA	0.35	0.35	0.35	0.35
Copper, total	1	1	0	9.00	9.00	9.00	9.00	9.00	9.00	9.00	NA	9.00	9	9	9
Copper, dissolved	1	1	0	9.10	9.10	9.10	9.10	9.10	9.10	9.10	NA	9.10	9.1	9.1	9.1
Lead, total	1	1	0	14.40	14.40	14.40	14.40	14.40	14.40	14.4	NA	14.40	14.4	14.4	14.4
Lead, dissolved	1	0	1	0.90	0.90	0.90	0.90	0.90	0.900	0.90	NA	0.90	0.9	0.9	0.9
Mercury, total	1	0	1	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	NA	0.05	0.05	0.05	0.05
Mercury, dissolved	1	0	1	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	NA	0.05	0.05	0.05	0.05
Methyl mercury	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, total	1	1	0	1.80	1.80	1.80	1.80	1.80	1.80	1.80	NA	1.80	1.8	1.8	1.8
Nickel, dissolved	1	1	0	1.60	1.60	1.60	1.60	1.60	1.60	1.60	NA	1.60	1.6	1.6	1.6
Zinc, total	1	1	0	14.20	14.20	14.20	14.20	14.20	14.2	14.20	NA	14.20	14.2	14.2	14.2
Zinc, dissolved	1	1	0	14.70	14.70	14.70	14.70	14.70	14.70	14.7	NA	14.70	14.7	14.7	14.7

Table D-7. Summary of the surface-water chemistry for the Reference Areas.

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹		Number of Samples with Detected Concentrations		Number of Samples with Concentrations <DL ¹		5th Percentile ^{2,3}		10th Percentile ^{2,3}		25th Percentile ^{2,3}		50th Percentile ^{2,3}		75th Percentile ^{2,3}		90th Percentile ^{2,3}		95th Percentile ^{2,3}		Arithmetic Mean ^{2,3}		Standard Deviation ^{2,3}		Geometric Mean ^{2,4}		Minimum ²		Maximum ²	
	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²																
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)																														
1,1'-Biphenyl	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	NA	NA	5.00	5	5																
1-Methylnaphthalene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND						
1-Methylphenanthrene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND						
2,6-Dimethylnaphthalene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND						
2-Methylnaphthalene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Acenaphthene	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	NA	NA	5.00	5	5																
Acenaphthylene	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	NA	NA	5.00	5	5																
Anthracene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
Fluorene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
Naphthalene	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	NA	NA	5.00	5	5																
Phenanthrene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
Benz(a)anthracene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
Benzo(a)pyrene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
Benzo(b)fluoranthene	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	NA	NA	5.00	5	5																
Benzo(g,h,i)perylene	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	NA	NA	5.00	5	5																
Benzo(k)fluoranthene	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	NA	NA	5.00	5	5																
Chrysene	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	NA	NA	5.00	5	5																
Dibenz(a,h)anthracene	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	NA	NA	5.00	5	5																
Fluoranthene	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	NA	NA	5.00	5	5																
Indeno(1,2,3-cd)pyrene	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	NA	NA	5.00	5	5																
Perylene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND								
Pyrene	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	NA	NA	5.00	5	5																

Table D-7. Summary of the surface-water chemistry for the Reference Areas.

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
PCB Aroclors (µg/L)															
Aroclor-1016	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	1	0	1	0.47	0.47	0.47	0.47	0.47	0.47	0.475	0.47	NA	0.48	0.475	0.475
Total PCBs ⁵	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Organochlorine Pesticides (µg/L)															
Aldrin	1	0	1	0.02	0.02	0.02	0.02	0.02	0.02	0.0240	0.02	NA	0.02	0.024	0.024
Dieldrin	1	0	1	0.05	0.05	0.05	0.05	0.05	0.05	0.0475	0.05	NA	0.05	0.0475	0.0475
Phthalates (µg/L)															
Bis(2-ethylhexyl)phthalate	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorinated Benzenes (µg/L)															
Hexachloro-1,3-butadiene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	NA	5.00	5	5
1,2,3,4-Tetrachlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4,5-Tetrachlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table D-7. Summary of the surface-water chemistry for the Reference Areas.

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
<i>Chlorinated Benzenes (µg/L; cont.)</i>															
1,2-Dichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Chlorinated Ethanes (µg/L)</i>															
1,1,1-Trichloroethane	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	NA	5.00	5	5
1,2-Dichloroethane	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	NA	5.00	5	5
<i>Other COPCs (µg/L)</i>															
Acetone	1	0	1	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	NA	5.00	5	5
Carbon disulfide	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA = not applicable (was measured but all values were screened out or was not measured in the reach); ND = no data (i.e., the substance was not measured at all in the estuary);

PCBs = polychlorinated biphenyls; DL = detection limit.

¹Excluding results for which the detection limit was greater than the selected chemical benchmark (see methods section for details).

²If the result is <DL, the value of 1/2 the detection limit was assigned.

³The percentiles, arithmetic mean and standard deviation were calculated using log_e transformed data.

⁴The geomean was not calculated using the log_e transformed data.

⁵The concentrations of PCB Aroclors were summed to calculate Total PCBs.

Table D-8. Summary of the pore-water chemistry for the Upper Calcasieu River Area of Concern (UCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹			Number of Samples with Detected Concentrations			Number of Samples with Concentrations <DL ¹			5th Percentile ^{2,3}			10th Percentile ^{2,3}			25th Percentile ^{2,3}			50th Percentile ^{2,3}			75th Percentile ^{2,3}			90th Percentile ^{2,3}			95th Percentile ^{2,3}			Arithmetic Mean ^{2,3}			Standard Deviation ^{2,3}			Geometric Mean ^{2,4}			Minimum ²			Maximum ²		
	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²															
Conventionals (mg/L)																																													
Hydrogen sulfide	29	28	1	0.001	0.001	0.001	0.003	0.004	0.01	0.0191	0.005	0.01	0.003	0.0004295	0.0365																														
Total dissolved sulfide	29	28	1	0.01	0.02	0.02	0.03	0.04	0.07	0.163	0.05	0.09	0.03	0.005	0.6																														
Nitrogen, as ammonia	29	29	0	0.10	0.10	0.20	0.30	0.40	0.60	0.659	0.35	0.27	0.28	0.1	2.8																														
Ammonia - toxic units (no units)	29	29	0	0.03	0.03	0.05	0.10	0.19	0.28	0.320	0.17	0.25	0.10	0.0282	2.54																														
Metals (µg/L)																																													
Chromium, total	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND																													
Chromium, dissolved	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND																													
Copper, total	4	4	0	4.67	5.24	7.29	9.93	11.45	11.72	11.8	8.44	0.52	8.35	4.16	11.9																														
Copper, dissolved	15	15	0	2.74	2.99	5.24	5.82	6.26	9.99	11.7	5.73	0.46	5.64	2.38	12.3																														
Lead, total	15	0	15	0.73	0.90	0.90	0.90	0.90	0.90	0.958	0.87	0.09	0.86	0.38	1.1																														
Lead, dissolved	15	11	4	0.07	0.07	0.07	0.31	0.35	0.38	0.399	0.23	0.12	0.19	0.065	0.42																														
Mercury, total	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND																													
Mercury, dissolved	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND																													
Methyl mercury	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND																													
Nickel, total	14	14	0	3.87	4.04	4.35	4.75	5.31	5.57	5.62	4.77	0.12	4.76	3.74	5.68																														
Nickel, dissolved	15	15	0	3.52	4.48	4.74	5.01	5.69	6.01	6.12	4.92	0.23	4.89	2.03	6.31																														
Zinc, total	2	1	1	7.30	7.36	7.53	7.82	8.11	8.30	8.36	7.82	0.10	7.81	7.25	8.42																														
Zinc, dissolved	15	15	0	83.53	138.21	293.48	475.00	556.02	697.19	753	354.25	1.21	353.72	39.4	781																														
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)																																													
1,1'-Biphenyl	15	15	0	0.002	0.002	0.002	0.002	0.003	0.004	0.00391	0.003	0.001	0.003	0.0019	0.0044																														
1-Methylnaphthalene	15	15	0	0.004	0.004	0.004	0.005	0.01	0.01	0.0102	0.01	0.004	0.01	0.0035	0.02																														

Table D-8. Summary of the pore-water chemistry for the Upper Calcasieu River Area of Concern (UCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹			Number of Samples with Detected Concentrations			Number of Samples with Concentrations <DL ¹			5th Percentile ^{2,3}			10th Percentile ^{2,3}			25th Percentile ^{2,3}			50th Percentile ^{2,3}			75th Percentile ^{2,3}			90th Percentile ^{2,3}			95th Percentile ^{2,3}			Arithmetic Mean ^{2,3}			Standard Deviation ^{2,3}			Geometric Mean ^{2,4}			Minimum ²			Maximum ²		
PAHs ($\mu\text{g/L}$; cont.)																																													
1-Methylphenanthrene	15	15	0	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.00188	0.001	0.0004	0.001	0.0007	0.0023																									
2,6-Dimethylnaphthalene	15	15	0	0.001	0.001	0.001	0.002	0.003	0.005	0.00752	0.003	0.003	0.003	0.002	0.002	0.002	0.0011	0.011	0.011	0.0113																									
2-Methylnaphthalene	15	15	0	0.01	0.01	0.01	0.01	0.01	0.01	0.0111	0.01	0.004	0.004	0.005	0.005	0.004	0.004	0.005	0.0198																										
Acenaphthene	15	15	0	0.002	0.003	0.004	0.01	0.01	0.02	0.07	0.100	0.02	0.03	0.03	0.03	0.03	0.03	0.019	0.1136																										
Acenaphthylene	15	15	0	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.00324	0.002	0.001	0.001	0.001	0.001	0.001	0.004	0.004	0.004	0.0038																								
Anthracene	15	15	0	0.001	0.001	0.001	0.002	0.003	0.004	0.00561	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.008	0.0082																										
Fluorene	15	15	0	0.005	0.01	0.01	0.01	0.01	0.01	0.0146	0.01	0.004	0.004	0.005	0.005	0.004	0.004	0.008	0.0039	0.0162																									
Naphthalene	15	15	0	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.0269	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.0101	0.0279																									
Phenanthrene	15	15	0	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.0335	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.0142	0.0364																									
Benz(a)anthracene	15	15	0	0.0003	0.0003	0.0004	0.001	0.001	0.002	0.00315	0.001	0.001	0.001	0.001	0.001	0.001	0.0002	0.0049																											
Benzo(a)pyrene	15	15	0	0.0003	0.0004	0.0004	0.001	0.001	0.002	0.00533	0.002	0.003	0.001	0.001	0.001	0.001	0.0001	0.0122																											
Benzo(b)fluoranthene	15	15	0	0.0002	0.0003	0.0004	0.001	0.001	0.004	0.00643	0.002	0.003	0.001	0.0002	0.0002	0.0002	0.00002	0.0107																											
Benzo(g,h,i)perylene	15	15	0	0.0002	0.0002	0.0003	0.0004	0.0004	0.001	0.00519	0.001	0.003	0.001	0.0001	0.0001	0.0001	0.0001	0.0108																											
Benzo(k)fluoranthene	15	15	0	0.0001	0.0001	0.0002	0.0004	0.0004	0.001	0.00161	0.001	0.001	0.0003	0.0003	0.0003	0.0003	0.00003	0.0021																											
Chrysene	15	15	0	0.0005	0.001	0.001	0.001	0.001	0.003	0.00368	0.002	0.001	0.001	0.0004	0.0004	0.0004	0.0004	0.0062																											
Dibenz(a,h)anthracene	15	15	0	0.0001	0.0001	0.0002	0.0002	0.0002	0.0004	0.00185	0.001	0.001	0.0003	0.0003	0.0003	0.0003	0.0001	0.0036																											
Fluoranthene	15	15	0	0.003	0.003	0.01	0.01	0.01	0.02	0.0201	0.01	0.01	0.01	0.01	0.01	0.01	0.003	0.0245																											
Indeno(1,2,3-cd)pyrene	15	15	0	0.0001	0.0001	0.0002	0.0003	0.001	0.002	0.00243	0.001	0.001	0.0004	0.0004	0.0004	0.0004	0.0001	0.0032																											
Perylene	15	15	0	0.001	0.001	0.001	0.002	0.004	0.004	0.0125	0.004	0.01	0.006	0.006	0.006	0.006	0.0232																												
Pyrene	15	15	0	0.001	0.001	0.004	0.01	0.01	0.01	0.0226	0.01	0.01	0.011	0.011	0.011	0.011	0.0443																												

Table D-8. Summary of the pore-water chemistry for the Upper Calcasieu River Area of Concern (UCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹		Number of Samples with Detected Concentrations		Number of Samples with Concentrations <DL ¹		5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹																
PCB Aroclors ($\mu\text{g/L}$)																		
Aroclor-1016	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	15	0	15	0.05	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0	0.05	0.05	0.05	0.05	0.05	0.05
Aroclor-1232	15	0	15	0.05	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0	0.05	0.05	0.05	0.05	0.05	0.05
Aroclor-1242	15	0	15	0.05	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0	0.05	0.05	0.05	0.05	0.05	0.05
Aroclor-1248	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	15	0	15	0.05	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0	0.05	0.05	0.05	0.05	0.05	0.05
PCB Congeners ($\mu\text{g/L}$)																		
PCB 105	15	5	10	0.00004	0.00005	0.00005	0.0001	0.001	0.004	0.00496	0.001	0.002	0.0002	0.00004	0.00552			
PCB 118	15	3	12	0.0002	0.0002	0.0002	0.0003	0.0004	0.001	0.000982	0.0004	0.0003	0.0003	0.00019	0.00101			
PCB 128	15	0	15	0.00004	0.00004	0.0001	0.0001	0.0001	0.0001	0.0000935	0.0001	0.00002	0.0001	0.000035	0.000125			
PCB 132/153	15	1	14	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.000302	0.0001	0.0001	0.0001	0.000045	0.0006			
PCB 138/160	15	15	0	0.003	0.003	0.004	0.01	0.01	0.02	0.0234	0.01	0.01	0.01	0.00203	0.03048			
PCB 170/190	15	1	14	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.000518	0.0002	0.0003	0.0001	0.000055	0.00125			
PCB 18/17	15	9	6	0.00004	0.00004	0.00004	0.002	0.004	0.004	0.00491	0.002	0.002	0.001	0.00004	0.00561			
PCB 180	15	7	8	0.0001	0.0001	0.0001	0.0002	0.0004	0.001	0.00139	0.0004	0.001	0.0002	0.00004	0.00276			
PCB 187	15	5	10	0.0001	0.0001	0.0001	0.0001	0.001	0.002	0.00191	0.001	0.001	0.0002	0.00005	0.00244			
PCB 195/208	15	0	15	0.00004	0.00005	0.0001	0.0001	0.0001	0.0001	0.0000985	0.0001	0.00002	0.0001	0.000035	0.00013			
PCB 206	15	1	14	0.00005	0.0001	0.0001	0.0001	0.0001	0.0001	0.000134	0.0001	0.00003	0.0001	0.00004	0.000145			
PCB 209	15	3	12	0.00005	0.0001	0.0001	0.0001	0.0001	0.0002	0.000287	0.0001	0.0001	0.0001	0.00004	0.00049			
PCB 28	15	2	13	0.00004	0.00004	0.00005	0.00005	0.0001	0.002	0.00346	0.001	0.001	0.0001	0.00003	0.00466			
PCB 29	15	4	11	0.00003	0.00003	0.00003	0.00004	0.0003	0.001	0.00265	0.001	0.002	0.0001	0.000025	0.00589			

Table D-8. Summary of the pore-water chemistry for the Upper Calcasieu River Area of Concern (UCR AOC).

Chemicals of Potential Concern (COPCs)															
	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
PCB Congeners (µg/L; cont.)															
PCB 44	15	9	6	0.0001	0.0001	0.0001	0.001	0.001	0.002	0.00261	0.001	0.001	0.0004	0.000055	0.00274
PCB 5/8	15	10	5	0.00003	0.00004	0.00004	0.01	0.01	0.02	0.0242	0.01	0.01	0.002	0.000025	0.03219
PCB 52	15	10	5	0.00003	0.00003	0.00004	0.002	0.003	0.004	0.00571	0.002	0.002	0.001	0.000025	0.00752
PCB 66	15	0	15	0.00004	0.00005	0.0001	0.0001	0.0001	0.0001	0.0000985	0.0001	0.00002	0.0001	0.000035	0.00013
PCB 77/110	15	3	12	0.00004	0.00004	0.00004	0.00005	0.0001	0.0002	0.000391	0.0001	0.0001	0.0001	0.00004	0.00058
PCB 87/115	15	4	11	0.00004	0.00005	0.00005	0.0001	0.001	0.003	0.00339	0.001	0.001	0.0001	0.00003	0.0044
PCB 90/101	15	1	14	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.000288	0.0001	0.0001	0.0001	0.00005	0.0006
PCB 201/157/173	15	0	15	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.000121	0.0001	0.00003	0.0001	0.00004	0.00016
Total PCBs ⁵	15	15	0	0.005	0.01	0.01	0.03	0.04	0.05	0.0515	0.03	0.02	0.02	0.00365	0.05797
Organochlorine Pesticides (µg/L)															
Aldrin	15	0	15	0.00002	0.00002	0.00002	0.00002	0.00003	0.00004	0.0000510	0.00003	0.00001	0.00003	0.000015	0.000065
Dieldrin	15	0	15	0.00003	0.00003	0.00004	0.00004	0.00004	0.0001	0.0000740	0.00005	0.00002	0.00004	0.000025	0.000095
Phthalates (µg/L)															
Bis(2-ethylhexyl)phthalate	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorinated Benzenes (µg/L)															
Hexachloro-1,3-butadiene	15	0	15	0.07	0.07	0.07	0.07	0.07	0.07	0.0750	0.07	0	0.08	0.075	0.075
Hexachlorobenzene	15	14	1	0.00003	0.00004	0.0004	0.002	0.003	0.004	0.00412	0.002	0.002	0.001	0.00002	0.00436
1,2,3,4-Tetrachlorobenzene	15	14	1	0.0001	0.0002	0.001	0.01	0.01	0.02	0.0209	0.01	0.01	0.003	0.000085	0.02395
1,2,3-Trichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table D-8. Summary of the pore-water chemistry for the Upper Calcasieu River Area of Concern (UCR AOC).

Chemicals of Potential Concern (COPCs)															
	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
<i>Chlorinated Benzenes (µg/L; cont.)</i>															
1,2,4,5-Tetrachlorobenzene	15	5	10	0.0001	0.0001	0.0001	0.0001	0.0004	0.005	0.0144	0.003	0.01	0.0002	0.000055	0.02985
1,2,4-Trichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	15	14	1	0.0002	0.0002	0.0003	0.001	0.002	0.003	0.00303	0.001	0.001	0.001	0.00014	0.00318
<i>Chlorinated Ethanes (µg/L)</i>															
1,1,1-Trichloroethane	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Other COPCs (µg/L)</i>															
Acetone	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NA = not applicable (was measured but all values were screened out or was not measured in the reach); ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls; DL = detection limit.

¹Excluding results for which the detection limit was greater than the selected chemical benchmark (see methods section for details).

²If the result is <DL, the value of 1/2 the detection limit was assigned.

³The percentiles, arithmetic mean and standard deviation were calculated using log_e transformed data.

⁴The geometric mean was not calculated using the log_e transformed data.

⁵The concentrations of PCB Congeners were summed to calculate Total PCBs.

Table D-9. Summary of the pore-water chemistry for the Bayou d'Inde Area of Concern (BI AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
Conventionals (mg/L)															
Hydrogen sulfide	31	30	1	0.001	0.002	0.003	0.003	0.01	0.01	0.0102	0.004	0.003	0.004	0.000965	0.0145
Total dissolved sulfide	31	30	1	0.01	0.02	0.02	0.03	0.04	0.07	0.0760	0.04	0.02	0.03	0.005	0.09
Nitrogen, as ammonia	31	31	0	0.10	0.20	0.30	0.40	0.60	0.70	0.849	0.44	0.17	0.39	0.1	1
Ammonia - toxic units (no units)	31	31	0	0.04	0.05	0.11	0.15	0.20	0.31	0.349	0.16	0.08	0.13	0.024	0.364
Metals (µg/L)															
Chromium, total	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, dissolved	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, total	7	7	0	5.42	5.90	6.72	7.38	7.60	9.82	11.6	7.52	0.31	7.48	4.97	13.75
Copper, dissolved	15	15	0	3.77	3.84	4.19	5.16	6.55	7.59	8.84	5.50	0.33	5.46	3.76	12.29
Lead, total	15	1	14	0.73	0.90	0.90	0.90	0.98	1.10	1.10	0.91	0.10	0.89	0.38	1.1
Lead, dissolved	15	14	1	0.14	0.20	0.21	0.29	0.47	0.66	0.847	0.37	0.22	0.30	0.026	1.37
Mercury, total	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury, dissolved	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl mercury	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, total	15	14	1	3.50	4.44	5.35	6.32	8.40	10.41	18.0	7.15	0.88	6.98	1.9	54.3
Nickel, dissolved	15	15	0	4.98	5.07	5.68	6.13	7.78	10.41	11.3	6.75	0.27	6.72	4.88	11.4
Zinc, total	6	2	4	3.55	3.55	4.28	7.25	18.84	60.00	91.4	12.18	2.76	11.53	3.55	139
Zinc, dissolved	15	15	0	68.57	117.14	281.67	590.00	723.37	1084.62	1380	386.75	1.94	385.57	21.9	1450
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)															
1,1'-Biphenyl	15	15	0	0.002	0.002	0.003	0.004	0.005	0.007	0.00793	0.004	0.002	0.004	0.0013	0.0108
1-Methylnaphthalene	15	15	0	0.005	0.01	0.01	0.01	0.01	0.02	0.0238	0.01	0.01	0.01	0.0044	0.0392

Table D-9. Summary of the pore-water chemistry for the Bayou d'Inde Area of Concern (BI AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
PAHs ($\mu\text{g/L}$; cont.)															
1-Methylphenanthrene	15	15	0	0.001	0.001	0.002	0.003	0.01	0.03	0.0350	0.01	0.01	0.005	0.0004	0.0383
2,6-Dimethylnaphthalene	15	15	0	0.001	0.002	0.003	0.003	0.005	0.01	0.0183	0.01	0.01	0.004	0.0009	0.0304
2-Methylnaphthalene	15	15	0	0.01	0.01	0.01	0.01	0.01	0.02	0.0231	0.01	0.01	0.01	0.0044	0.03
Acenaphthene	15	15	0	0.003	0.004	0.01	0.01	0.03	0.03	0.0958	0.03	0.06	0.01	0.002	0.2649
Acenaphthylene	15	15	0	0.001	0.001	0.002	0.003	0.01	0.01	0.0147	0.01	0.01	0.003	0.0005	0.0173
Anthracene	15	15	0	0.002	0.003	0.003	0.004	0.01	0.03	0.0391	0.01	0.01	0.01	0.001	0.0524
Fluorene	15	15	0	0.01	0.01	0.01	0.02	0.02	0.03	0.0382	0.02	0.01	0.01	0.003	0.0403
Naphthalene	15	15	0	0.01	0.01	0.01	0.02	0.02	0.04	0.0613	0.02	0.02	0.02	0.0095	0.0684
Phenanthrene	15	15	0	0.01	0.02	0.02	0.03	0.04	0.05	0.0639	0.03	0.02	0.03	0.0065	0.0796
Benz(a)anthracene	15	15	0	0.0004	0.001	0.001	0.001	0.003	0.01	0.00886	0.003	0.003	0.001	0.0002	0.0097
Benzo(a)pyrene	15	15	0	0.0002	0.0003	0.0004	0.001	0.001	0.004	0.00590	0.001	0.002	0.001	0.0002	0.0073
Benzo(b)fluoranthene	15	15	0	0.0005	0.001	0.001	0.001	0.003	0.01	0.00824	0.003	0.003	0.001	0.0004	0.0102
Benzo(g,h,i)perylene	15	15	0	0.0002	0.0003	0.0004	0.001	0.001	0.004	0.00673	0.001	0.002	0.001	0.0001	0.0068
Benzo(k)fluoranthene	15	15	0	0.0002	0.0002	0.0003	0.0004	0.001	0.001	0.00129	0.001	0.0004	0.0005	0.0002	0.0015
Chrysene	15	15	0	0.001	0.001	0.002	0.002	0.01	0.05	0.0652	0.01	0.02	0.004	0.0008	0.0754
Dibenz(a,h)anthracene	15	15	0	0.0001	0.0001	0.0001	0.0005	0.001	0.001	0.00248	0.001	0.001	0.0004	0.00002	0.005
Fluoranthene	15	15	0	0.003	0.004	0.01	0.01	0.02	0.02	0.0251	0.01	0.01	0.01	0.0015	0.0342
Indeno(1,2,3-cd)pyrene	15	15	0	0.0001	0.0001	0.0003	0.0005	0.001	0.001	0.00155	0.001	0.001	0.0004	0.0001	0.0033
Perylene	15	15	0	0.001	0.001	0.001	0.002	0.004	0.01	0.00870	0.003	0.003	0.002	0.0008	0.0115
Pyrene	15	15	0	0.002	0.003	0.004	0.006	0.02	0.08	0.0790	0.02	0.03	0.01	0.0009	0.0819

Table D-9. Summary of the pore-water chemistry for the Bayou d'Inde Area of Concern (BI AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹			Number of Samples with Detected Concentrations			Number of Samples with Concentrations <DL ¹			5th Percentile ^{2,3}			10th Percentile ^{2,3}			25th Percentile ^{2,3}			50th Percentile ^{2,3}			75th Percentile ^{2,3}			90th Percentile ^{2,3}			95th Percentile ^{2,3}			Arithmetic Mean ^{2,3}			Standard Deviation ^{2,3}			Geometric Mean ^{2,4}			Minimum ²			Maximum ²		
	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²																															
PCB Aroclors ($\mu\text{g/L}$)																																													
Aroclor-1016	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA															
Aroclor-1221	15	0	15	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05															
Aroclor-1232	15	0	15	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05															
Aroclor-1242	15	0	15	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05															
Aroclor-1248	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA																
Aroclor-1254	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA																
Aroclor-1260	15	0	15	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05															
PCB Congeners ($\mu\text{g/L}$)																																													
PCB 105	15	10	5	0.0001	0.0001	0.0001	0.001	0.002	0.01	0.0207	0.004	0.01	0.001	0.00006	0.02411																														
PCB 118	15	7	8	0.0002	0.0003	0.0003	0.001	0.001	0.002	0.00293	0.001	0.001	0.001	0.00012	0.00516																														
PCB 128	15	1	14	0.00004	0.00004	0.0001	0.0001	0.0001	0.0002	0.000289	0.0001	0.0001	0.0001	0.000035	0.00058																														
PCB 132/153	15	3	12	0.0001	0.0001	0.0001	0.0001	0.0002	0.0003	0.000425	0.0002	0.0002	0.0001	0.00006	0.00074																														
PCB 138/160	15	15	0	0.003	0.003	0.005	0.01	0.01	0.04	0.0629	0.015	0.02	0.01	0.0032	0.06803																														
PCB 170/190	15	0	15	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.000270	0.0001	0.0001	0.0001	0.00006	0.00027																														
PCB 18/17	15	6	9	0.00004	0.00004	0.0001	0.0001	0.004	0.02	0.0199	0.004	0.01	0.0003	0.00003	0.02504																														
PCB 180	15	10	5	0.0001	0.0001	0.0002	0.001	0.001	0.001	0.00189	0.001	0.001	0.0004	0.000065	0.00292																														
PCB 187	15	7	8	0.0001	0.0001	0.0001	0.0002	0.001	0.002	0.00332	0.001	0.001	0.0003	0.00006	0.00381																														
PCB 195/208	15	0	15	0.00004	0.00005	0.0001	0.0001	0.0001	0.0002	0.000175	0.0001	0.00005	0.0001	0.000035	0.000175																														
PCB 206	15	6	9	0.00003	0.00005	0.0001	0.0001	0.0002	0.0002	0.000205	0.0001	0.0001	0.0001	0.00002	0.00023																														
PCB 209	15	4	11	0.0001	0.0001	0.0001	0.0002	0.0004	0.001	0.00118	0.0003	0.0004	0.0002	0.00005	0.00147																														
PCB 28	15	1	14	0.00004	0.00004	0.00005	0.0001	0.0001	0.0002	0.00106	0.0003	0.001	0.0001	0.000035	0.00319																														
PCB 29	15	5	10	0.00003	0.00003	0.00004	0.0001	0.0002	0.001	0.000715	0.0002	0.0002	0.0001	0.00002	0.00082																														

Table D-9. Summary of the pore-water chemistry for the Bayou d'Inde Area of Concern (BI AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
PCB Congeners ($\mu\text{g/L}$; cont.)															
PCB 44	15	4	11	0.0001	0.0001	0.0001	0.0001	0.0002	0.001	0.00129	0.0003	0.0004	0.0002	0.000065	0.00132
PCB 5/8	15	8	7	0.00003	0.00003	0.0001	0.0002	0.003	0.01	0.0154	0.003	0.01	0.0004	0.000025	0.0227
PCB 52	15	5	10	0.00002	0.00003	0.00003	0.0001	0.001	0.003	0.00434	0.001	0.002	0.0002	0.00002	0.0058
PCB 66	15	2	13	0.00004	0.00005	0.0001	0.0001	0.0001	0.0004	0.000907	0.0002	0.0004	0.0001	0.000035	0.0016
PCB 77/110	15	5	10	0.00004	0.00004	0.0001	0.0001	0.0003	0.001	0.00120	0.0003	0.0005	0.0001	0.000035	0.00185
PCB 87/115	15	3	12	0.00004	0.00004	0.0001	0.0001	0.0001	0.001	0.00125	0.0002	0.0004	0.0001	0.000035	0.00146
PCB 90/101	15	5	10	0.0001	0.0001	0.0001	0.0002	0.0004	0.001	0.000863	0.0003	0.0003	0.0002	0.000045	0.00094
PCB 201/157/173	15	0	15	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.000210	0.0001	0.0001	0.0001	0.000045	0.00021
Total PCBs ⁵	15	15	0	0.01	0.01	0.01	0.02	0.03	0.10	0.125	0.03	0.04	0.02	0.00842	0.124865
Organochlorine Pesticides ($\mu\text{g/L}$)															
Aldrin	15	2	13	0.00002	0.00002	0.00002	0.00004	0.0001	0.0001	0.000815	0.0002	0.001	0.0001	0.00002	0.00244
Dieldrin	15	1	14	0.00003	0.00003	0.00004	0.0001	0.0001	0.0001	0.000297	0.0001	0.0002	0.0001	0.000025	0.0007
Phthalates ($\mu\text{g/L}$)															
Bis(2-ethylhexyl)phthalate	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorinated Benzenes ($\mu\text{g/L}$)															
Hexachloro-1,3-butadiene	15	0	15	0.07	0.07	0.07	0.07	0.07	0.07	0.0750	0.07	0.000	0.08	0.075	0.075
Hexachlorobenzene	15	14	1	0.0002	0.0002	0.0004	0.001	0.004	0.01	0.00841	0.003	0.004	0.001	0.00011	0.01327
1,2,3,4-Tetrachlorobenzene	15	14	1	0.0003	0.0003	0.0004	0.001	0.01	0.02	0.0182	0.01	0.01	0.001	0.000285	0.01835
1,2,3-Trichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table D-9. Summary of the pore-water chemistry for the Bayou d'Inde Area of Concern (BI AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,4}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
<i>Chlorinated Benzenes (µg/L; cont.)</i>															
1,2,4,5-Tetrachlorobenzene	15	13	2	0.0002	0.001	0.001	0.002	0.004	0.005	0.00741	0.003	0.003	0.002	0.00007	0.01314
1,2,4-Trichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	15	13	2	0.0001	0.0001	0.0003	0.001	0.002	0.003	0.00392	0.001	0.001	0.001	0.000065	0.00499
<i>Chlorinated Ethanes (µg/L)</i>															
1,1,1-Trichloroethane	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Other COPCs (µg/L)</i>															
Acetone	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NA = not applicable (was measured but all values were screened out or was not measured in the reach); ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls; DL = detection limit.

¹Excluding results for which the detection limit was greater than the selected chemical benchmark (see methods section for details).

²If the result is <DL, the value of 1/2 the detection limit was assigned.

³The percentiles, arithmetic mean and standard deviation were calculated using log_e transformed data.

⁴The geometric mean was not calculated using the log_e transformed data.

⁵The concentrations of PCB Congeners were summed to calculate Total PCBs.

Table D-10. Summary of the pore-water chemistry for the Middle Calcasieu River Area of Concern (MCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
Conventionals (mg/L)															
Hydrogen sulfide	15	15	0	0.001	0.001	0.001	0.002	0.003	0.004	0.00580	0.002	0.002	0.002	0.000719	0.00998
Total dissolved sulfide	15	15	0	0.02	0.02	0.02	0.03	0.05	0.08	0.106	0.05	0.04	0.04	0.019	0.18
Nitrogen, as ammonia	15	15	0	0.20	0.20	0.30	0.30	0.40	0.40	0.400	0.31	0.06	0.30	0.2	0.4
Ammonia - toxic units (no units)	15	15	0	0.04	0.05	0.07	0.08	0.12	0.12	0.144	0.09	0.04	0.08	0.03	0.193
Metals (µg/L)															
Chromium, total	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, dissolved	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, total	2	2	0	8.41	8.72	9.69	11.52	13.68	15.14	15.7	11.52	0.57	11.47	8.12	16.2
Copper, dissolved	8	8	0	3.80	3.97	4.43	5.93	6.26	6.86	7.48	5.47	0.25	5.45	3.63	8.15
Lead, total	8	0	8	0.38	0.38	0.38	0.38	0.49	0.96	1.03	0.51	0.19	0.48	0.38	1.1
Lead, dissolved	8	7	1	0.08	0.09	0.15	0.20	0.31	0.37	0.386	0.22	0.10	0.19	0.06	0.4
Mercury, total	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury, dissolved	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl mercury	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, total	3	3	0	4.81	4.89	5.13	5.56	6.56	7.24	7.48	5.89	0.24	5.88	4.73	7.72
Nickel, dissolved	8	8	0	3.34	3.52	4.31	5.06	5.45	6.64	7.51	4.98	0.28	4.95	3.16	8.47
Zinc, total	7	2	5	3.55	3.55	3.55	3.55	9.32	12.02	12.1	5.69	0.66	5.57	3.55	12.2
Zinc, dissolved	8	8	0	126.62	157.12	244.92	297.60	682.81	1088.91	1100	366.08	1.30	365.75	102	1110
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)															
1,1'-Biphenyl	8	8	0	0.002	0.002	0.002	0.004	0.005	0.01	0.0213	0.01	0.01	0.004	0.0015	0.0302
1-Methylnaphthalene	8	8	0	0.004	0.01	0.01	0.01	0.03	1.23	4.46	0.40	1.49	0.03	0.0037	12.338

Table D-10. Summary of the pore-water chemistry for the Middle Calcasieu River Area of Concern (MCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
PAHs ($\mu\text{g/L}$; cont.)															
1-Methylphenanthrene	8	8	0	0.001	0.001	0.002	0.002	0.01	0.24	0.561	0.09	0.27	0.005	0.0009	0.9698
2,6-Dimethylnaphthalene	8	8	0	0.003	0.004	0.01	0.01	0.02	0.82	2.52	0.28	0.96	0.02	0.0025	5.81
2-Methylnaphthalene	8	8	0	0.01	0.01	0.01	0.01	0.02	0.38	0.910	0.14	0.40	0.02	0.0049	1.6465
Acenaphthene	8	8	0	0.001	0.001	0.004	0.01	0.01	0.23	0.533	0.09	0.25	0.01	0.0008	0.9108
Acenaphthylene	8	8	0	0.001	0.001	0.001	0.002	0.004	0.10	0.222	0.04	0.11	0.00	0.0011	0.3569
Anthracene	8	8	0	0.001	0.001	0.002	0.003	0.01	0.10	0.189	0.04	0.09	0.01	0.001	0.2874
Fluorene	8	8	0	0.01	0.01	0.01	0.01	0.01	0.26	0.613	0.11	0.29	0.02	0.0078	1.0646
Naphthalene	8	8	0	0.01	0.01	0.01	0.02	0.03	0.10	0.177	0.05	0.08	0.02	0.0102	0.2636
Phenanthrene	8	8	0	0.02	0.02	0.02	0.03	0.03	0.32	0.747	0.13	0.33	0.04	0.0152	1.3145
Benz(a)anthracene	8	8	0	0.0003	0.0004	0.001	0.001	0.004	0.09	0.199	0.04	0.10	0.002	0.0003	0.314
Benzo(a)pyrene	8	8	0	0.0004	0.0004	0.001	0.001	0.004	0.06	0.116	0.02	0.06	0.002	0.0003	0.177
Benzo(b)fluoranthene	8	8	0	0.0003	0.0004	0.001	0.001	0.005	0.04	0.0771	0.02	0.04	0.002	0.0003	0.1144
Benzo(g,h,i)perylene	8	8	0	0.0004	0.0004	0.001	0.001	0.004	0.03	0.0579	0.01	0.03	0.002	0.0003	0.0832
Benzo(k)fluoranthene	8	8	0	0.0002	0.0002	0.0004	0.001	0.001	0.01	0.0149	0.003	0.01	0.001	0.0001	0.022
Chrysene	8	8	0	0.001	0.001	0.001	0.001	0.01	0.18	0.366	0.07	0.17	0.004	0.0004	0.5803
Dibenz(a,h)anthracene	8	8	0	0.0002	0.0003	0.0004	0.0005	0.002	0.02	0.0306	0.01	0.01	0.001	0.0002	0.0435
Fluoranthene	8	8	0	0.003	0.004	0.01	0.01	0.01	0.05	0.0805	0.02	0.04	0.01	0.0027	0.1143
Indeno(1,2,3-cd)pyrene	8	8	0	0.0003	0.0004	0.0005	0.001	0.003	0.01	0.0185	0.004	0.01	0.001	0.0003	0.0249
Perylene	8	8	0	0.0004	0.001	0.001	0.001	0.003	0.01	0.0178	0.004	0.01	0.002	0.0003	0.026
Pyrene	8	8	0	0.002	0.002	0.003	0.005	0.02	0.21	0.377	0.07	0.17	0.01	0.0013	0.5727

Table D-10. Summary of the pore-water chemistry for the Middle Calcasieu River Area of Concern (MCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹		Number of Samples with Detected Concentrations		Number of Samples with Concentrations <DL ¹		5th Percentile ^{2,3}		10th Percentile ^{2,3}		25th Percentile ^{2,3}		50th Percentile ^{2,3}		75th Percentile ^{2,3}		90th Percentile ^{2,3}		95th Percentile ^{2,3}		Arithmetic Mean ^{2,3}		Standard Deviation ^{2,4}		Geometric Mean ^{2,4}		Minimum ²		Maximum ²	
	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,4}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²															
PCB Aroclors ($\mu\text{g/L}$)																														
Aroclor-1016	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
Aroclor-1221	7	0	7	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05					
Aroclor-1232	7	0	7	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05					
Aroclor-1242	7	0	7	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05					
Aroclor-1248	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Aroclor-1254	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Aroclor-1260	7	0	7	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05					
PCB Congeners ($\mu\text{g/L}$)																														
PCB 105	8	1	7	0.00004	0.00004	0.0001	0.0001	0.0001	0.001	0.00107	0.000	0.001	0.0001	0.00003	0.00158															
PCB 118	8	3	5	0.0002	0.0002	0.0003	0.0004	0.001	0.004	0.00775	0.002	0.004	0.001	0.00023	0.01122															
PCB 128	8	1	7	0.00004	0.00005	0.0001	0.0001	0.0001	0.001	0.00109	0.000	0.001	0.0001	0.000035	0.00161															
PCB 132/153	8	2	6	0.0001	0.0001	0.0001	0.0001	0.001	0.01	0.00650	0.002	0.003	0.0003	0.00007	0.0073															
PCB 138/160	8	8	0	0.004	0.005	0.01	0.01	0.01	0.03	0.0361	0.01	0.01	0.01	0.0039	0.04726															
PCB 170/190	8	1	7	0.0001	0.0001	0.0001	0.0001	0.0002	0.01	0.0301	0.01	0.02	0.0002	0.000055	0.0465															
PCB 18/17	8	5	3	0.0001	0.0001	0.0001	0.002	0.01	0.01	0.0159	0.004	0.01	0.001	0.00005	0.02165															
PCB 180	8	7	1	0.0002	0.0003	0.0005	0.001	0.001	0.002	0.00382	0.001	0.002	0.001	0.00016	0.00516															
PCB 187	8	4	4	0.0001	0.0001	0.0001	0.0002	0.001	0.003	0.00565	0.001	0.003	0.0004	0.00008	0.00784															
PCB 195/208	8	0	8	0.00004	0.00005	0.0001	0.0001	0.0001	0.0001	0.000130	0.0001	0.00004	0.0001	0.000035	0.00013															
PCB 206	8	1	7	0.00005	0.0001	0.0001	0.0001	0.0001	0.001	0.000961	0.0003	0.0005	0.0001	0.00004	0.0014															
PCB 209	8	0	8	0.00005	0.0001	0.0001	0.0001	0.0001	0.0002	0.000155	0.0001	0.00004	0.0001	0.00004	0.000155															
PCB 28	8	7	1	0.0005	0.001	0.002	0.003	0.01	0.03	0.0279	0.01	0.01	0.003	0.00012	0.02993															
PCB 29	8	4	4	0.00003	0.00004	0.0001	0.0002	0.001	0.002	0.00282	0.001	0.001	0.0002	0.00003	0.00403															

Table D-10. Summary of the pore-water chemistry for the Middle Calcasieu River Area of Concern (MCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
PCB Congeners ($\mu\text{g/L}$; cont.)															
PCB 44	8	3	5	0.0001	0.0001	0.0001	0.0002	0.001	0.002	0.00204	0.001	0.001	0.0003	0.000065	0.00252
PCB 5/8	8	7	1	0.004	0.01	0.01	0.02	0.03	0.07	0.120	0.03	0.05	0.01	0.000085	0.16813
PCB 52	8	7	1	0.001	0.001	0.002	0.003	0.01	0.02	0.0190	0.01	0.01	0.003	0.00003	0.02016
PCB 66	8	1	7	0.00004	0.00005	0.0001	0.0001	0.0001	0.0004	0.000747	0.0002	0.0004	0.0001	0.000035	0.00108
PCB 77/110	8	6	2	0.0001	0.0001	0.001	0.001	0.01	0.02	0.023	0.01	0.01	0.0013	0.00005	0.02644
PCB 87/115	8	1	7	0.00004	0.00004	0.00005	0.00001	0.0001	0.0005	0.000892	0.0002	0.0004	0.0001	0.00003	0.00131
PCB 90/101	8	3	5	0.0001	0.0001	0.0001	0.0002	0.001	0.002	0.00197	0.001	0.001	0.0002	0.00006	0.00211
PCB 201/157/173	8	1	7	0.00005	0.0001	0.0001	0.0001	0.0002	0.0002	0.000257	0.0001	0.0001	0.0001	0.00004	0.00031
Total PCBs ⁵	8	8	0	0.03	0.03	0.03	0.04	0.10	0.21	0.263	0.09	0.09	0.06	0.026405	0.3143
Organochlorine Pesticides ($\mu\text{g/L}$)															
Aldrin	8	3	5	0.00003	0.00003	0.00004	0.0001	0.001	0.01	0.0151	0.003	0.01	0.0002	0.000025	0.02278
Dieldrin	8	0	8	0.00003	0.00004	0.00004	0.0001	0.0001	0.0001	0.0000950	0.0001	0.00003	0.0001	0.000025	0.000095
Phthalates ($\mu\text{g/L}$)															
Bis(2-ethylhexyl)phthalate	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorinated Benzenes ($\mu\text{g/L}$)															
Hexachloro-1,3-butadiene	8	0	8	0.07	0.07	0.07	0.07	0.07	0.07	0.0750	0.07	0	0.08	0.075	0.075
Hexachlorobenzene	8	8	0	0.001	0.002	0.002	0.003	0.01	0.01	0.0104	0.005	0.004	0.003	0.00083	0.01066
1,2,3,4-Tetrachlorobenzene	8	8	0	0.002	0.003	0.003	0.01	0.02	0.04	0.0364	0.01	0.01	0.01	0.00137	0.03735
1,2,3-Trichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table D-10. Summary of the pore-water chemistry for the Middle Calcasieu River Area of Concern (MCR AOC).

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
<i>Chlorinated Benzenes (µg/L; cont.)</i>															
1,2,4,5-Tetrachlorobenzene	8	4	4	0.0001	0.0001	0.0001	0.0002	0.01	0.02	0.0194	0.01	0.01	0.001	0.000055	0.02252
1,2,4-Trichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	8	8	0	0.001	0.001	0.001	0.002	0.003	0.01	0.0103	0.003	0.004	0.002	0.00114	0.01243
<i>Chlorinated Ethanes (µg/L)</i>															
1,1,1-Trichloroethane	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Other COPCs (µg/L)</i>															
Acetone	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NA = not applicable (was measured but all values were screened out or was not measured in the reach); ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls; DL = detection limit.

¹Excluding results for which the detection limit was greater than the selected chemical benchmark (see methods section for details).

²If the result is <DL, the value of 1/2 the detection limit was assigned.

³The percentiles, arithmetic mean and standard deviation were calculated using log_e transformed data.

⁴The geometric mean was not calculated using the log_e transformed data.

⁵The concentrations of PCB Congeners were summed to calculate Total PCBs.

Table D-11. Summary of the pore-water chemistry for the Reference Areas.

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹														
	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²	
Conventionals (mg/L)															
Hydrogen sulfide	14	14	0	0.001	0.001	0.001	0.001	0.002	0.002	0.00315	0.002	0.001	0.001	0.000592	0.00459
Total dissolved sulfide	14	14	0	0.01	0.01	0.01	0.02	0.03	0.03	0.0469	0.02	0.02	0.02	0.01	0.079
Nitrogen, as ammonia	14	14	0	0.10	0.10	0.12	0.20	0.20	0.37	0.434	0.21	0.10	0.19	0.1	0.5
Ammonia - toxic units (no units)	14	14	0	0.02	0.02	0.03	0.04	0.06	0.12	0.180	0.07	0.06	0.05	0.0216	0.29
Metals (µg/L)															
Chromium, total	0	0	0	ND	ND	ND	ND	ND							
Chromium, dissolved	0	0	0	ND	ND	ND	ND	ND							
Copper, total	3	3	0	5.95	5.98	6.08	6.24	8.36	9.92	10.5	7.46	0.36	7.43	5.92	11.1
Copper, dissolved	7	7	0	3.26	3.47	4.28	5.55	8.36	10.75	11.3	6.01	0.53	5.92	3.07	11.8
Lead, total	7	0	7	0.38	0.38	0.38	0.38	0.90	0.90	0.900	0.58	0.19	0.55	0.38	0.9
Lead, dissolved	7	6	1	0.08	0.09	0.11	0.15	0.20	0.25	0.261	0.16	0.06	0.15	0.075	0.27
Mercury, total	0	0	0	ND	ND	ND	ND	ND							
Mercury, dissolved	0	0	0	ND	ND	ND	ND	ND							
Methyl mercury	0	0	0	ND	ND	ND	ND	ND							
Nickel, total	3	3	0	3.92	4.00	4.23	4.65	5.60	6.24	6.47	4.95	0.27	4.93	3.85	6.7
Nickel, dissolved	7	7	0	2.57	2.68	3.25	3.71	4.86	5.37	5.72	3.94	0.29	3.90	2.45	6.08
Zinc, total	4	1	3	3.55	3.55	3.55	3.55	4.34	6.12	6.83	4.34	0.38	4.30	3.55	7.62
Zinc, dissolved	7	7	0	166.00	182.47	233.33	325.00	448.25	602.75	617	319.53	0.68	319.41	151	632
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)															
1,1'-Biphenyl	7	7	0	0.002	0.002	0.002	0.002	0.003	0.003	0.00300	0.003	0.0004	0.002	0.0022	0.003
1-Methylnaphthalene	7	7	0	0.004	0.004	0.005	0.01	0.01	0.01	0.0129	0.01	0.004	0.01	0.0038	0.0136

Table D-11. Summary of the pore-water chemistry for the Reference Areas.

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹														
	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²	
PAHs ($\mu\text{g/L}$; cont.)															
1-Methylphenanthrene	7	7	0	0.001	0.001	0.001	0.001	0.002	0.002	0.00164	0.001	0.0004	0.001	0.0008	0.0017
2,6-Dimethylnaphthalene	7	7	0	0.001	0.001	0.002	0.003	0.004	0.005	0.00550	0.003	0.002	0.003	0.0013	0.0061
2-Methylnaphthalene	7	7	0	0.005	0.01	0.01	0.01	0.01	0.01	0.0156	0.01	0.004	0.01	0.0046	0.0162
Acenaphthene	7	7	0	0.001	0.002	0.003	0.004	0.005	0.01	0.00557	0.004	0.002	0.003	0.0006	0.0056
Acenaphthylene	7	7	0	0.0004	0.0005	0.0005	0.001	0.001	0.002	0.00188	0.001	0.001	0.001	0.0004	0.002
Anthracene	7	7	0	0.001	0.001	0.001	0.001	0.002	0.002	0.00225	0.001	0.001	0.001	0.0007	0.0024
Fluorene	7	7	0	0.01	0.01	0.01	0.01	0.01	0.01	0.0140	0.01	0.003	0.01	0.0049	0.015
Naphthalene	7	7	0	0.01	0.01	0.01	0.02	0.02	0.02	0.0217	0.02	0.005	0.02	0.0091	0.0226
Phenanthrene	7	7	0	0.01	0.02	0.02	0.02	0.03	0.03	0.033	0.02	0.008	0.02	0.0111	0.0342
Benz(a)anthracene	7	7	0	0.0002	0.0003	0.0003	0.0004	0.0004	0.001	0.000570	0.0004	0.0001	0.0004	0.0002	0.0006
Benzo(a)pyrene	7	7	0	0.0001	0.0001	0.0002	0.0004	0.001	0.001	0.00109	0.0005	0.0004	0.0003	0.0001	0.0013
Benzo(b)fluoranthene	7	7	0	0.0003	0.0003	0.0004	0.001	0.001	0.01	0.0130	0.003	0.01	0.001	0.0002	0.0182
Benzo(g,h,i)perylene	7	7	0	0.0001	0.0001	0.0002	0.0003	0.0003	0.001	0.00233	0.001	0.001	0.0003	0.00004	0.0032
Benzo(k)fluoranthene	7	7	0	0.0001	0.0001	0.0001	0.0003	0.0004	0.002	0.00316	0.001	0.002	0.0003	0.00004	0.0043
Chrysene	7	7	0	0.0005	0.0005	0.001	0.001	0.001	0.01	0.0154	0.004	0.01	0.001	0.0005	0.0217
Dibenz(a,h)anthracene	7	7	0	0.0001	0.0001	0.0001	0.0002	0.0003	0.0003	0.000370	0.0002	0.0001	0.0002	0.00004	0.0004
Fluoranthene	7	7	0	0.003	0.004	0.005	0.01	0.01	0.01	0.0140	0.01	0.005	0.01	0.0029	0.0171
Indeno(1,2,3-cd)pyrene	7	7	0	0.0001	0.0002	0.0002	0.0003	0.0004	0.002	0.00337	0.001	0.002	0.0004	0.0001	0.0046
Perylene	7	7	0	0.0003	0.0004	0.001	0.001	0.001	0.001	0.000800	0.001	0.000	0.001	0.0002	0.0008
Pyrene	7	7	0	0.002	0.002	0.002	0.003	0.003	0.01	0.00912	0.004	0.004	0.003	0.0017	0.0118

Table D-11. Summary of the pore-water chemistry for the Reference Areas.

Chemicals of Potential Concern (COPCs)	Number of Samples (n) ¹														
	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²	
PCB Aroclors ($\mu\text{g/L}$)															
Aroclor-1016	0	0	0	NA	NA	NA	NA								
Aroclor-1221	7	0	7	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0	0.05	0.05	0.05	
Aroclor-1232	7	0	7	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0	0.05	0.05	0.05	
Aroclor-1242	7	0	7	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05	
Aroclor-1248	0	0	0	NA	NA	NA	NA								
Aroclor-1254	0	0	0	NA	NA	NA	NA								
Aroclor-1260	7	0	7	0.05	0.05	0.05	0.05	0.05	0.0500	0.05	0	0.05	0.05	0.05	
PCB Congeners ($\mu\text{g/L}$)															
PCB 105	7	0	7	0.00005	0.00005	0.00005	0.00005	0.00005	0.0001	0.0000500	0.00005	0.000002	0.00005	0.000045	0.00005
PCB 118	7	0	7	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.000255	0.0002	0.00001	0.0002	0.00023	0.000255
PCB 128	7	0	7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000550	0.0001	0.000002	0.0001	0.00005	0.000055
PCB 132/153	7	0	7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000800	0.0001	0.000005	0.0001	0.00007	0.00008
PCB 138/160	7	7	0	0.002	0.002	0.003	0.003	0.004	0.005	0.00515	0.004	0.001	0.003	0.00224	0.00542
PCB 170/190	7	0	7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000900	0.0001	0.000005	0.0001	0.00008	0.00009
PCB 18/17	7	0	7	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.0000400	0.00004	0	0.00004	0.00004	0.00004
PCB 180	7	5	2	0.0001	0.0001	0.0002	0.0004	0.001	0.001	0.00114	0.001	0.0004	0.0003	0.000065	0.00128
PCB 187	7	0	7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000700	0.0001	0.000005	0.0001	0.00006	0.00007
PCB 195/208	7	0	7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000600	0.0001	0.000005	0.0001	0.00005	0.00006
PCB 206	7	1	6	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.000131	0.0001	0.00004	0.0001	0.00006	0.00016
PCB 209	7	1	6	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.000161	0.0001	0.0001	0.0001	0.00006	0.0002
PCB 28	7	4	3	0.00005	0.00005	0.0001	0.002	0.004	0.004	0.00434	0.002	0.002	0.001	0.000045	0.00437
PCB 29	7	0	7	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.0000300	0.00003	0.00000	0.00003	0.00003	0.00003

Table D-11. Summary of the pore-water chemistry for the Reference Areas.

Chemicals of Potential Concern (COPCs)															
	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
PCB Congeners (µg/L; cont.)															
PCB 44	7	1	6	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.000476	0.0001	0.0002	0.0001	0.000065	0.00065
PCB 5/8	7	5	2	0.00004	0.00004	0.0003	0.01	0.01	0.01	0.0132	0.01	0.01	0.001	0.00035	0.01416
PCB 52	7	3	4	0.00003	0.00003	0.00003	0.00004	0.001	0.002	0.00264	0.001	0.001	0.0002	0.00003	0.00324
PCB 66	7	1	6	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.000422	0.0001	0.0002	0.0001	0.00005	0.00058
PCB 77/110	7	2	5	0.00004	0.00004	0.00004	0.00005	0.0003	0.001	0.00107	0.0003	0.0005	0.0001	0.00004	0.00133
PCB 87/115	7	0	7	0.00005	0.00005	0.00005	0.00005	0.00005	0.0001	0.0000500	0.00005	0.000002	0.00005	0.000045	0.00005
PCB 90/101	7	1	6	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.00232	0.001	0.001	0.0001	0.00006	0.00328
PCB 201/157/173	7	0	7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000700	0.0001	0.000002	0.0001	0.000065	0.00007
Total PCBs ⁵	7	7	0	0.004	0.005	0.01	0.01	0.02	0.03	0.0273	0.01	0.01	0.01	0.00389	0.0291
Organochlorine Pesticides (µg/L)															
Aldrin	7	1	6	0.00002	0.00002	0.00002	0.00002	0.00003	0.0001	0.000240	0.0001	0.0001	0.00004	0.000025	0.00033
Dieldrin	7	0	7	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.0000400	0.00004	0	0.00004	0.00004	0.00004
Phthalates (µg/L)															
Bis(2-ethylhexyl)phthalate	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorinated Benzenes (µg/L)															
Hexachloro-1,3-butadiene	7	0	7	0.07	0.07	0.07	0.07	0.07	0.07	0.0750	0.07	0.00	0.08	0.075	0.075
Hexachlorobenzene	7	7	0	0.00004	0.0001	0.0001	0.001	0.001	0.002	0.00221	0.001	0.001	0.0004	0.00002	0.00252
1,2,3,4-Tetrachlorobenzene	7	6	1	0.0001	0.0001	0.0004	0.01	0.01	0.01	0.0118	0.01	0.01	0.002	0.000095	0.01189
1,2,3-Trichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table D-11. Summary of the pore-water chemistry for the Reference Areas.

Chemicals of Potential Concern (COPCs)															
	Number of Samples (n) ¹	Number of Samples with Detected Concentrations	Number of Samples with Concentrations <DL ¹	5th Percentile ^{2,3}	10th Percentile ^{2,3}	25th Percentile ^{2,3}	50th Percentile ^{2,3}	75th Percentile ^{2,3}	90th Percentile ^{2,3}	95th Percentile ^{2,3}	Arithmetic Mean ^{2,3}	Standard Deviation ^{2,3}	Geometric Mean ^{2,4}	Minimum ²	Maximum ²
<i>Chlorinated Benzenes (µg/L; cont.)</i>															
1,2,4,5-Tetrachlorobenzene	7	5	2	0.0001	0.0001	0.0001	0.003	0.004	0.01	0.00644	0.003	0.003	0.001	0.000085	0.00711
1,2,4-Trichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	7	5	2	0.0001	0.0001	0.0001	0.0005	0.002	0.002	0.00244	0.001	0.001	0.0004	0.00004	0.00271
<i>Chlorinated Ethanes (µg/L)</i>															
1,1,1-Trichloroethane	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Other COPCs (µg/L)</i>															
Acetone	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	0	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NA = not applicable (was measured but all values were screened out or was not measured in the reach); ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls; DL = detection limit.

¹Excluding results for which the detection limit was greater than the selected chemical benchmark (see methods section for details).

²If the result is <DL, the value of 1/2 the detection limit was assigned.

³The percentiles, arithmetic mean and standard deviation were calculated using log_e transformed data.

⁴The geometric mean was not calculated using the log_e transformed data.

⁵The concentrations of PCB Congeners were summed to calculate Total PCBs.

Table D-12. Comparison of concentrations of chemicals of potential concern in surface water from each area of concern (AOC) to those in reference areas.

Chemicals of Potential Concern (COPCs)	95th Percentile Concentration ¹						
	Reference Areas	UCR AOC ²	Ratio (UCR: Reference)	BI AOC ²	Ratio (BI: Reference)	MCR AOC ²	Ratio (MCR: Reference)
Conventionals (mg/L)							
Hydrogen sulfide	ND	ND	ND	ND	ND	ND	ND
Nitrogen, as ammonia	0.330	0.472	1.4	<u>3.37</u>	10.2	0.437	1.3
Total dissolved sulfide	ND	ND	ND	ND	ND	ND	ND
Ammonia - toxic units (no units)	NA	0.164	NA	0.825	NA	0.384	NA
Metals (µg/L)							
Chromium, total	0.350	2.70	7.7	25.0	71.4	2.15	6.1
Chromium, dissolved	0.350	2.70	7.7	14.2	40.6	2.15	6.1
Copper, total	9.00	7.54	0.8	16.1	1.8	16.5	1.8
Copper, dissolved	9.10	6.77	0.7	22.6	2.5	9.82	1.1
Lead, total	14.4	14.1	1.0	2.70	0.2	1.05	0.1
Lead, dissolved	0.900	5.70	6.3	1.05	1.2	1.05	1.2
Mercury, total	0.0500	0.0800	1.6	0.170	3.4	0.100	2.0
Mercury, dissolved	0.0500	0.0800	1.6	0.0780	1.6	0.0500	1.0
Methyl mercury	ND	ND	ND	ND	ND	ND	ND
Nickel, total	1.80	17.6	9.8	25.6	14.2	16.8	9.3
Nickel, dissolved	1.60	17.6	11.0	17.4	10.9	17.4	10.9
Zinc, total	14.2	5.33	0.4	18.2	1.3	24.7	1.7
Zinc, dissolved	14.7	24.9	1.7	11.0	0.7	27.5	1.9
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)							
1,1'-Biphenyl	5.00	5.00	1.0	5.00	1.0	5.00	1.0
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	ND	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	NA	0.700	NA	NA	NA	NA	NA
Acenaphthene	5.00	5.00	1.0	5.00	1.0	5.00	1.0
Acenaphthylene	5.00	5.00	1.0	5.00	1.0	5.00	1.0
Anthracene	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	1.10	NA	NA	NA	NA	NA
Naphthalene	5.00	5.00	1.0	5.00	1.0	5.00	1.0
Phenanthrene	NA	0.700	NA	NA	NA	NA	NA
Benz(a)anthracene	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	5.00	5.00	1.0	5.00	1.0	5.00	1.0
Benzo(g,h,i)perylene	5.00	5.00	1.0	5.00	1.0	5.00	1.0
Benzo(k)fluoranthene	5.00	5.00	1.0	5.00	1.0	5.00	1.0
Chrysene	5.00	5.00	1.0	5.00	1.0	5.00	1.0
Dibenz(a,h)anthracene	5.00	5.00	1.0	5.00	1.0	5.00	1.0

Table D-12. Comparison of concentrations of chemicals of potential concern in surface water from each area of concern (AOC) to those in reference areas.

Chemicals of Potential Concern (COPCs)	95th Percentile Concentration ¹						
	Reference Areas	UCR AOC ²	Ratio (UCR: Reference)	BI AOC ²	Ratio (BI: Reference)	MCR AOC ²	Ratio (MCR: Reference)
<i>PAHs (µg/L; cont.)</i>							
Fluoranthene	5.00	5.00	1.0	5.00	1.0	5.00	1.0
Indeno(1,2,3-cd)pyrene	5.00	5.00	1.0	5.00	1.0	5.00	1.0
Perylene	ND	ND	ND	ND	ND	ND	ND
Pyrene	5.00	5.00	1.0	5.00	1.0	5.00	1.0
<i>PCB Aroclors (µg/L)</i>							
Aroclor-1016	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NA	0.0950	NA	NA	NA	NA	NA
Aroclor-1232	NA	0.0950	NA	NA	NA	NA	NA
Aroclor-1242	NA	0.0950	NA	NA	NA	NA	NA
Aroclor-1248	NA	0.0950	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	0.210	NA	NA	NA
Aroclor-1260	0.475	0.500	1.1	0.500	1.1	0.500	1.1
Total PCBs	NA	NA	NA	0.665	NA	NA	NA
<i>Organochlorine Pesticides (µg/L)</i>							
Aldrin	0.0240	0.0250	1.0	0.0250	1.0	0.025	1.0
Dieldrin	0.0475	0.0500	1.1	0.0500	1.1	0.050	1.1
<i>Phthalates (µg/L)</i>							
Bis(2-ethylhexyl)phthalate	NA	2.00	NA	NA	NA	3.70	NA
<i>Chlorinated Benzenes (µg/L)</i>							
Hexachloro-1,3-butadiene	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	5.00	5.00	1.0	5.00	1.0	5.00	1.0
1,2,3,4-Tetrachlorobenzene	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	NA	0.600	NA	NA	NA	NA	NA
1,2,4,5-Tetrachlorobenzene	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NA	0.600	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	0.600	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	0.650	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	0.650	NA	NA	NA	NA	NA
Pentachlorobenzene	ND	ND	ND	ND	ND	ND	ND
<i>Chlorinated Ethanes (µg/L)</i>							
1,1,1-Trichloroethane	5.00	5.00	1.0	5.00	1.0	5.00	1.0
1,2-Dichloroethane	5.00	5.00	1.0	5.00	1.0	5.00	1.0

Table D-12. Comparison of concentrations of chemicals of potential concern in surface water from each area of concern (AOC) to those in reference areas.

Chemicals of Potential Concern (COPCs)	95th Percentile Concentration ¹						
	Reference Areas	UCR AOC ²	Ratio (UCR: Reference)	BI AOC ²	Ratio (BI: Reference)	MCR AOC ²	Ratio (MCR: Reference)
<i>Other COPCs (μg/L)</i>							
Acetone		5.00	5.00	1.0	<u>20.0</u>	4.0	5.00
Carbon disulfide	NA	NA	NA	1.88	NA	NA	NA

NA = not applicable (was measured but all values were screened out or was not measured in the reach);

ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls.

¹Substances for which the 95th percentile concentration for an AOC is a factor of two or higher than that for reference areas (highlighted with bold and underlined) were retained as preliminary contaminants of concern (COCs).

²UCR AOC = Upper Calcasieu River AOC; BI AOC = Bayou d'Inde AOC; MCR AOC = Middle Calcasieu River AOC.

Table D-13. Comparison of concentrations of chemicals of potential concern in pore water from each area of concern (AOC) to those in pore water from sediments from reference areas.

Chemicals of Potential Concern (COPCs)	Reference Areas	95th Percentile Concentration ¹					
		UCR AOC ²	Ratio (UCR: Reference)	BI AOC ²	Ratio (BI: Reference)	MCR AOC ²	Ratio (MCR: Reference)
Conventionals (mg/L)							
Hydrogen sulfide	0.00315	0.0191	6.0	0.0102	3.2	0.00580	1.8
Total dissolved sulfide	0.0469	0.163	3.5	0.0760	1.6	0.106	2.3
Nitrogen, as ammonia	0.434	0.659	1.5	0.849	2.0	0.400	0.9
Ammonia - toxic units (no units)	0.180	0.320	1.8	0.349	1.9	0.144	0.8
Metals (µg/L)							
Chromium, total	ND	ND	ND	ND	ND	ND	ND
Chromium, dissolved	ND	ND	ND	ND	ND	ND	ND
Copper, total	10.5	11.8	1.1	11.6	1.1	15.7	1.5
Copper, dissolved	11.3	11.7	1.0	8.84	0.8	7.48	0.7
Lead, total	0.900	0.958	1.1	1.10	1.2	1.03	1.1
Lead, dissolved	0.261	0.399	1.5	0.847	3.2	0.386	1.5
Mercury, total	ND	ND	ND	ND	ND	ND	ND
Mercury, dissolved	ND	ND	ND	ND	ND	ND	ND
Methyl mercury	ND	ND	ND	ND	ND	ND	ND
Nickel, total	6.47	5.62	0.9	18.0	2.8	7.48	1.2
Nickel, dissolved	5.72	6.12	1.1	11.3	2.0	7.51	1.3
Zinc, total	6.83	8.36	1.2	91.4	13.4	12.1	1.8
Zinc, dissolved	617	753	1.2	1380	2.2	1100	1.8
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)							
1,1'-Biphenyl	0.00300	0.00391	1.3	0.00793	2.6	0.0213	7.1
1-Methylnaphthalene	0.0129	0.0102	0.8	0.0238	1.8	4.46	345.7
1-Methylphenanthrene	0.00164	0.00188	1.1	0.0350	21.3	0.561	342.1
2,6-Dimethylnaphthalene	0.00550	0.00752	1.4	0.0183	3.3	2.52	458.2
2-Methylnaphthalene	0.0156	0.0111	0.7	0.0231	1.5	0.910	58.3
Acenaphthene	0.00557	0.100	18.0	0.0958	17.2	0.533	95.7
Acenaphthylene	0.00188	0.00324	1.7	0.0147	7.8	0.222	118.1
Anthracene	0.00225	0.00561	2.5	0.0391	17.4	0.189	84.0
Fluorene	0.0140	0.0146	1.0	0.0382	2.7	0.613	43.8
Naphthalene	0.0217	0.0269	1.2	0.0613	2.8	0.177	8.2
Phenanthrene	0.033	0.0335	1.0	0.0639	1.9	0.747	22.6
Benz(a)anthracene	0.000570	0.00315	5.5	0.00886	15.5	0.199	349.1
Benzo(a)pyrene	0.00109	0.00533	4.9	0.00590	5.4	0.116	106.4
Benzo(b)fluoranthene	0.0130	0.00643	0.5	0.00824	0.6	0.0771	5.9
Benzo(g,h,i)perylene	0.00233	0.00519	2.2	0.00673	2.9	0.0579	24.8
Benzo(k)fluoranthene	0.00316	0.00161	0.5	0.00129	0.4	0.0149	4.7
Chrysene	0.0154	0.00368	0.2	0.0652	4.2	0.366	23.8

Table D-13. Comparison of concentrations of chemicals of potential concern in pore water from each area of concern (AOC) to those in pore water from sediments from reference areas.

Chemicals of Potential Concern (COPCs)	Reference Areas	95th Percentile Concentration ¹					
		UCR AOC ²	Ratio (UCR: Reference)	BI AOC ²	Ratio (BI: Reference)	MCR AOC ²	Ratio (MCR: Reference)
<i>PAHs (µg/L; cont.)</i>							
Dibenz(a,h)anthracene	0.000370	0.00185	5.0	0.00248	6.7	0.0306	82.7
Fluoranthene	0.0140	0.0201	1.4	0.0251	1.8	0.0805	5.8
Indeno(1,2,3-cd)pyrene	0.00337	0.00243	0.7	0.00155	0.5	0.0185	5.5
Perylene	0.000800	0.0125	15.6	0.00870	10.9	0.0178	22.3
Pyrene	0.00912	0.0226	2.5	0.0790	8.7	0.377	41.3
<i>PCB Aroclors (µg/L)</i>							
Aroclor-1016	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	0.0500	0.0500	1.0	0.0500	1.0	0.0500	1.0
Aroclor-1232	0.0500	0.0500	1.0	0.0500	1.0	0.0500	1.0
Aroclor-1242	0.0500	0.0500	1.0	0.0500	1.0	0.0500	1.0
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	0.0500	0.0500	1.0	0.0500	1.0	0.0500	1.0
<i>PCB Congeners (µg/L)</i>							
PCB 105	0.0000500	0.00496	99.2	0.0207	414.0	0.00107	21.4
PCB 118	0.000255	0.000982	3.9	0.00293	11.5	0.00775	30.4
PCB 128	0.0000550	0.0000935	1.7	0.000289	5.3	0.00109	19.8
PCB 132/153	0.0000800	0.000302	3.8	0.000425	5.3	0.00650	81.3
PCB 138/160	0.00515	0.0234	4.6	0.0629	12.2	0.0361	7.0
PCB 170/190	0.0000900	0.000518	5.8	0.000270	3.0	0.0301	334.4
PCB 18/17	0.0000400	0.00491	122.7	0.0199	497.5	0.0159	397.5
PCB 180	0.00114	0.00139	1.2	0.00189	1.7	0.00382	3.4
PCB 187	0.0000700	0.00191	27.3	0.00332	47.4	0.00565	80.7
PCB 195/208	0.0000600	0.0000985	1.6	0.000175	2.9	0.000130	2.2
PCB 206	0.000131	0.000134	1.0	0.000205	1.6	0.000961	7.3
PCB 209	0.000161	0.000287	1.8	0.00118	7.3	0.000155	1.0
PCB 28	0.00434	0.00346	0.8	0.00106	0.2	0.0279	6.4
PCB 29	0.0000300	0.00265	88.2	0.000715	23.8	0.00282	94.0
PCB 44	0.000476	0.00261	5.5	0.00129	2.7	0.00204	4.3
PCB 5/8	0.0132	0.0242	1.8	0.0154	1.2	0.120	9.1
PCB 52	0.00264	0.00571	2.2	0.00434	1.6	0.0190	7.2
PCB 66	0.000422	0.0000985	0.2	0.000907	2.1	0.000747	1.8
PCB 77/110	0.00107	0.000391	0.4	0.00120	1.1	0.023	21.5
PCB 87/115	0.0000500	0.00339	67.8	0.00125	25.0	0.000892	17.8
PCB 90/101	0.00232	0.000288	0.1	0.000863	0.4	0.00197	0.8
PCB 201/157/173	0.0000700	0.000121	1.7	0.000210	3.0	0.000257	3.7
Total PCBs	0.0273	0.0515	1.9	0.125	4.6	0.263	9.6

Table D-13. Comparison of concentrations of chemicals of potential concern in pore water from each area of concern (AOC) to those in pore water from sediments from reference areas.

Chemicals of Potential Concern (COPCs)	Reference Areas	95th Percentile Concentration ¹					
		UCR AOC ²	Ratio (UCR: Reference)	BI AOC ²	Ratio (BI: Reference)	MCR AOC ²	Ratio (MCR: Reference)
<i>Organochlorine Pesticides (µg/L)</i>							
Aldrin		0.000240	0.0000510	0.2	<u>0.000815</u>	3.4	<u>0.0151</u>
Dieldrin		0.0000400	0.0000740	1.8	<u>0.000297</u>	7.4	<u>0.0000950</u>
<i>Phthalates (µg/L)</i>							
Bis(2-ethylhexyl)phthalate	ND	ND	ND	ND	ND	ND	ND
<i>Chlorinated Benzenes (µg/L)</i>							
Hexachloro-1,3-butadiene	0.0750	0.0750	1.0	0.0750	1.0	0.0750	1.0
Hexachlorobenzene	0.00221	0.00412	1.9	<u>0.00841</u>	3.8	<u>0.0104</u>	4.7
1,2,3,4-Tetrachlorobenzene	0.0118	0.0209	1.8	0.0182	1.5	<u>0.0364</u>	3.1
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	0.00644	<u>0.0144</u>	2.2	0.00741	1.2	<u>0.0194</u>	3.0
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	0.00244	0.00303	1.2	0.00392	1.6	<u>0.0103</u>	4.2
<i>Chlorinated Ethanes (µg/L)</i>							
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
<i>Other COPCs (µg/L)</i>							
Acetone	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND

NA = not applicable (was measured but all values were screened out or was not measured in the reach);

ND = no data (i.e., the substance was not measured at all in the estuary); LMW-PAHs = low molecular weight-PAHs;

HMW-PAHs = high molecular weight-PAHs; PCBs = polychlorinated biphenyls; DL = detection limit.

¹Substances for which the 95th percentile concentration for an AOC is a factor of two or higher than that for reference areas (highlighted with bold and underlined) were retained as preliminary contaminants of concern (COCs) for each AOC.

²UCR AOC = Upper Calcasieu River AOC; BI AOC = Bayou d'Inde AOC; MCR AOC = Middle Calcasieu River AOC.

Table D-14. Predicted incidence of toxicity to aquatic plants exposed to surface water in the Calcasieu Estuary, based on evaluation of the levels of conventional variables¹ (i.e., samples with concentrations of one or more chemicals of potential concern above the selected benchmarks were predicted to be toxic).

Area of Concern (AOC)/Reach	n	Number of Samples Predicted to be Toxic	Predicted Incidence of Toxicity (%)	Risk to the Aquatic Plant Community ²
<i>Upper Calcasieu River AOC</i>				
Upper Calcasieu River - Mainstem	2	0	0	Low
Clooney Island Loop	0	NA	NA	NA
Contraband Bayou	0	NA	NA	NA
Coon Island Loop	2	0	0	Low
Overall UCR AOC	4	0	0	Low
<i>Bayou d'Inde AOC</i>				
Upper Bayou d'Inde	2	1	50	Indeterminate
Middle Bayou d'Inde	2	0	0	Low
Lower Bayou d'Inde - Mainstem	1	0	0	Low
Lower Bayou d'Inde - Lockport Marsh	2	1	50	Indeterminate
PPG Canal	0	NA	NA	NA
Overall BI AOC	7	2	29	Indeterminate
<i>Middle Calcasieu River AOC</i>				
Middle Calcasieu River - Mainstem	2	0	0	Low
Prien Lake and upper old river channel	1	0	0	Low
Indian Wells Lagoon	0	NA	NA	NA
Bayou Olsen	0	NA	NA	NA
Moss Lake	1	0	0	Low
Overall MCR AOC	4	0	0	Low
AOC Subtotal	15	2	13	Low
<i>Reference Areas</i>				
Bayou Choupique	0	NA	NA	NA
Grand Bayou	0	NA	NA	NA
Bayou Bois Connine	0	NA	NA	NA
Johnson Bayou	1	0	0	Low
Willow Bayou	0	NA	NA	NA
Overall Reference Areas	1	0	0	Low
Entire Estuary	16	2	13	Low

IOT = incidence of toxicity; n = number of samples; NA = not applicable.

¹Nitrogen ammonia and ammonia (toxic units).

²Risk to the Aquatic Plant Community:

Low: Predicted IOT in reach is <20% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT <20%).

Indeterminate: Predicted IOT in reach is 20 to 50% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT 20 - 50%).

High: Predicted IOT in reach is >50% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT >50%).

Table D-15. Predicted incidence of toxicity to aquatic plants exposed to surface water in the Calcasieu Estuary, based on evaluation of the levels of metals (i.e., samples with concentrations of one or more chemicals of potential concern above the selected benchmarks were predicted to be toxic).

Area of Concern (AOC)/Reach	n	Number of Samples Predicted to be Toxic	Predicted Incidence of Toxicity (%)	Risk to the Aquatic Plant Community ¹
<i>Upper Calcasieu River AOC</i>				
Upper Calcasieu River - Mainstem	6	6	100	Low
Clooney Island Loop	1	1	100	Low
Contraband Bayou	1	1	100	Low
Coon Island Loop	4	4	100	Low
Overall UCR AOC	12	12	100	Low
<i>Bayou d'Inde AOC</i>				
Upper Bayou d'Inde	5	5	100	Low
Middle Bayou d'Inde	6	6	100	Low
Lower Bayou d'Inde - Mainstem	4	4	100	Low
Lower Bayou d'Inde - Lockport Marsh	6	6	100	Low
PPG Canal	0	NA	NA	NA
Overall BI AOC	21	21	100	Low
<i>Middle Calcasieu River AOC</i>				
Middle Calcasieu River - Mainstem	10	10	100	Low
Prien Lake and upper old river channel	9	9	100	Low
Indian Wells Lagoon	0	NA	NA	NA
Bayou Olsen	0	NA	NA	NA
Moss Lake	3	3	100	Low
Overall MCR AOC	22	22	100	Low
AOC Subtotal	55	55	100	Low
<i>Reference Areas</i>				
Bayou Choupique	0	NA	NA	NA
Grand Bayou	0	NA	NA	NA
Bayou Bois Connine	0	NA	NA	NA
Johnson Bayou	1	1	100	Low
Willow Bayou	0	NA	NA	NA
Overall Reference Areas	1	1	100	Low
Entire Estuary	56	56	100	Low

IOT = incidence of toxicity; n = number of samples; NA = not applicable.

¹Risk to the Aquatic Plant Community:

Low: Predicted IOT in reach is <20% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT <100%).

Table D-16. Predicted incidence of toxicity to aquatic plants exposed to surface water in the Calcasieu Estuary, based on evaluation of the levels of organic substances (i.e., samples with concentrations of one or more chemicals of potential concern above the selected benchmarks were predicted to be toxic).

Area of Concern (AOC)/Reach	n	Number of Samples Predicted to be Toxic	Predicted Incidence of Toxicity (%)	Risk to the Aquatic Plant Community ¹
<i>Upper Calcasieu River AOC</i>				
Upper Calcasieu River - Mainstem	6	0	0	Low
Clooney Island Loop	1	0	0	Low
Contraband Bayou	1	0	0	Low
Coon Island Loop	4	0	0	Low
Overall UCR AOC	12	0	0	Low
<i>Bayou d'Inde AOC</i>				
Upper Bayou d'Inde	5	0	0	Low
Middle Bayou d'Inde	6	2	33	Indeterminate
Lower Bayou d'Inde - Mainstem	4	2	50	Indeterminate
Lower Bayou d'Inde - Lockport Marsh	6	0	0	Low
PPG Canal	0	NA	NA	NA
Overall BI AOC	21	4	19	Low
<i>Middle Calcasieu River AOC</i>				
Middle Calcasieu River - Mainstem	10	1	10	Low
Prien Lake and upper old river channel	9	0	0	Low
Indian Wells Lagoon	0	NA	NA	NA
Bayou Olsen	0	NA	NA	NA
Moss Lake	3	0	0	Low
Overall MCR AOC	22	1	5	Low
AOC Subtotal	55	5	9	Low
<i>Reference Areas</i>				
Bayou Choupique	0	NA	NA	NA
Grand Bayou	0	NA	NA	NA
Bayou Bois Connine	0	NA	NA	NA
Johnson Bayou	1	0	0	Low
Willow Bayou	0	NA	NA	NA
Overall Reference Areas	1	0	0	Low
Entire Estuary	56	5	9	Low

IOT = incidence of toxicity; n = number of samples; NA = not applicable.

¹Risk to the Aquatic Plant Community:

Low: Predicted IOT in reach is <20% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT <20%).

Indeterminate: Predicted IOT in reach is 20 to 50% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT 20 - 50%).

High: Predicted IOT in reach is >50% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT >50%).

Table D-17. Predicted incidence of toxicity to aquatic plants exposed to pore water from Calcasieu Estuary sediments, based on evaluation of the levels of conventional variables¹ (i.e., samples with concentrations of one or more chemicals of potential concern above the selected benchmarks were predicted to be toxic).

Area of Concern (AOC)/Reach	n	Number of Samples Predicted to be Toxic	Predicted Incidence of Toxicity (%)	Risk to the Aquatic Plant Community ²
<i>Upper Calcasieu River AOC</i>				
Upper Calcasieu River - Mainstem	8	3	38	Indeterminate
Clooney Island Loop	6	4	67	High
Contraband Bayou	6	3	50	Indeterminate
Coon Island Loop	9	8	89	High
Overall UCR AOC	29	18	62	High
<i>Bayou d'Inde AOC</i>				
Upper Bayou d'Inde	5	5	100	High
Middle Bayou d'Inde	5	5	100	High
Lower Bayou d'Inde - Mainstem	3	2	67	High
Lower Bayou d'Inde - Lockport Marsh	12	9	75	High
PPG Canal	6	6	100	High
Overall BI AOC	31	27	87	High
<i>Middle Calcasieu River AOC</i>				
Middle Calcasieu River - Mainstem	0	NA	NA	NA
Prien Lake and upper old river channel	4	1	25	Low
Indian Wells Lagoon	3	3	100	High
Bayou Olsen	5	1	20	Low
Moss Lake	3	2	67	High
Overall MCR AOC	15	7	47	Indeterminate
AOC Subtotal	75	52	69	High
<i>Reference Areas</i>				
Bayou Choupique	4	0	0	Low
Grand Bayou	3	1	33	Low
Bayou Bois Connine	2	2	100	High
Johnson Bayou	3	0	0	Low
Willow Bayou	2	0	0	Low
Overall Reference Areas	14	3	21	Low
Entire Estuary	89	55	62	High

IOT = incidence of toxicity; n = number of samples; NA = not applicable.

¹Hydrogen sulfide and ammonia (toxic units).

²Risk to the Aquatic Plant Community:

Low: Predicted IOT in reach is <20% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT <36.8%).

Indeterminate: Predicted IOT in reach is 20 to 50% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT 36.8 - 60.5%).

High: Predicted IOT in reach is >50% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT >60.5%).

Table D-18. Predicted incidence of toxicity to aquatic plants exposed to pore water from Calcasieu Estuary sediments, based on evaluation of the levels of metals (i.e., samples with concentrations of one or more chemicals of potential concern above the selected benchmarks were predicted to be toxic).

Area of Concern (AOC)/Reach	n	Number of Samples Predicted to be Toxic	Predicted Incidence of Toxicity (%)	Risk to the Aquatic Plant Community ¹
<i>Upper Calcasieu River AOC</i>				
Upper Calcasieu River - Mainstem	4	4	100	Low
Clooney Island Loop	3	3	100	Low
Contraband Bayou	3	3	100	Low
Coon Island Loop	5	5	100	Low
Overall UCR AOC	15	15	100	Low
<i>Bayou d'Inde AOC</i>				
Upper Bayou d'Inde	2	2	100	Low
Middle Bayou d'Inde	3	3	100	Low
Lower Bayou d'Inde - Mainstem	2	2	100	Low
Lower Bayou d'Inde - Lockport Marsh	6	6	100	Low
PPG Canal	2	2	100	Low
Overall BI AOC	15	15	100	Low
<i>Middle Calcasieu River AOC</i>				
Middle Calcasieu River - Mainstem	0	NA	NA	NA
Prien Lake and upper old river channel	2	2	100	Low
Indian Wells Lagoon	2	2	100	Low
Bayou Olsen	2	2	100	Low
Moss Lake	2	2	100	Low
Overall MCR AOC	8	8	100	Low
AOC Subtotal	38	38	100	Low
<i>Reference Areas</i>				
Bayou Choupique	2	2	100	NA
Grand Bayou	2	2	100	NA
Bayou Bois Connine	1	1	100	NA
Johnson Bayou	1	1	100	NA
Willow Bayou	1	1	100	NA
Overall Reference Areas	7	7	100	NA
Entire Estuary	45	45	100	Low

IOT = incidence of toxicity; n = number of samples; NA = not applicable.

¹Risk to the Aquatic Plant Community:

Low: Predicted IOT in reach is <20% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT 100%).

Table D-19. Predicted incidence of toxicity to aquatic plants exposed to pore water from Calcasieu Estuary sediments, based on evaluation of the levels of organic substances (i.e., samples with concentrations of one or more chemicals of potential concern above the selected benchmarks were predicted to be toxic).

Area of Concern (AOC)/Reach	n	Number of Samples Predicted to be Toxic	Predicted Incidence of Toxicity (%)	Risk to the Aquatic Plant Community ¹
<i>Upper Calcasieu River AOC</i>				
Upper Calcasieu River - Mainstem	4	0	0	Low
Clooney Island Loop	3	0	0	Low
Contraband Bayou	3	0	0	Low
Coon Island Loop	5	0	0	Low
Overall UCR AOC	15	0	0	Low
<i>Bayou d'Inde AOC</i>				
Upper Bayou d'Inde	2	0	0	Low
Middle Bayou d'Inde	3	0	0	Low
Lower Bayou d'Inde - Mainstem	2	0	0	Low
Lower Bayou d'Inde - Lockport Marsh	6	0	0	Low
PPG Canal	2	0	0	Low
Overall BI AOC	15	0	0	Low
<i>Middle Calcasieu River AOC</i>				
Middle Calcasieu River - Mainstem	0	NA	NA	NA
Prien Lake and upper old river channel	2	0	0	Low
Indian Wells Lagoon	2	1	50	Indeterminate
Bayou Olsen	2	1	50	Indeterminate
Moss Lake	2	0	0	Low
Overall MCR AOC	8	2	25	Indeterminate
AOC Subtotal	38	2	5	Low
<i>Reference Areas</i>				
Bayou Choupique	2	0	0	Low
Grand Bayou	2	0	0	Low
Bayou Bois Connine	1	0	0	Low
Johnson Bayou	1	0	0	Low
Willow Bayou	1	0	0	Low
Overall Reference Areas	7	0	0	Low
Entire Estuary	45	2	4	Low

IOT = incidence of toxicity; n = number of samples; NA = not applicable.

¹Risk to the Aquatic Plant Community:

Low: Predicted IOT in reach is <20% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT <20%).

Indeterminate: Predicted IOT in reach is 20 to 50% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT 20 - 50%).

High: Predicted IOT in reach is >50% higher than the predicted incidence of toxicity for selected reference samples (i.e., IOT >50%).

Table D-20. Observed incidence of toxicity to aquatic plants exposed to pore water from the Calcasieu Estuary, based on the results of 96-hour pore-water toxicity tests with the alga, *Ulva fasciata*, based on germination or growth.

Area of Concern (AOC)/Reach	n	Number of Toxic Samples	Observed Incidence of Toxicity (%)	Risk to the Aquatic Plant Community ¹
<i>Upper Calcasieu River AOC</i>				
Upper Calcasieu River - Mainstem	4	1	25	Low
Clooney Island Loop	3	0	0	Low
Contraband Bayou	3	1	33	Indeterminate
Coon Island Loop	5	1	20	Low
Overall UCR AOC	15	3	20	Low
<i>Bayou d'Inde AOC</i>				
Upper Bayou d'Inde	2	1	50	Indeterminate
Middle Bayou d'Inde	3	1	33	Indeterminate
Lower Bayou d'Inde - Mainstem	2	0	0	Low
Lower Bayou d'Inde - Lockport Marsh	6	2	33	Indeterminate
PPG Canal	2	0	0	Low
Overall BI AOC	15	4	27	Low
<i>Middle Calcasieu River AOC</i>				
Middle Calcasieu River - Mainstem	0	NA	NA	NA
Prien Lake and upper old river channel	2	0	0	Low
Indian Wells Lagoon	2	1	50	Indeterminate
Bayou Olsen	2	0	0	Low
Moss Lake	2	0	0	Low
Overall MCR AOC	8	1	13	Low
AOC Subtotal	38	8	21	Indeterminate
Reference Areas				
Bayou Choupique	2	0	0	Low
Grand Bayou	2	0	0	Low
Bayou Bois Connine	1	0	0	Low
Johnson Bayou	1	1	100	High
Willow Bayou	1	0	0	Low
Overall Reference Areas	7	1	14	Low
Entire Estuary	45	9	20	Low

IOT = incidence of toxicity; n = number of samples; NA = not applicable.

¹Risk to the Aquatic Plant Community:

Low: Observed IOT in reach is <20% higher than the observed incidence of toxicity for selected reference samples (i.e., IOT <31.2%).

Indeterminate: Observed IOT in reach is 20 to 50% higher than the observed incidence of toxicity for selected reference samples (i.e., IOT 31.2 - 57.0%).

High: Observed IOT in reach is >50% higher than the observed incidence of toxicity for selected reference samples (i.e., IOT >57.0%).

Table D-21. Observed magnitude of toxicity to aquatic plants exposed to pore water from the Calcasieu Estuary, based on the results of 96-hour pore-water toxicity tests with the alga, *Ulva fasciata*, based on germination.

Area of Concern (AOC)/Reach	n	Number of Toxic Samples	Average Germination (%)	Risk to the Aquatic Plant Community ¹	Observed Magnitude of Toxicity ²		
					Number of Samples/Risk Category	Low	Indeterminate
<i>Upper Calcasieu River AOC</i>							
Upper Calcasieu River - Mainstem	4	1	78.9	Low	3	0	1
Clooney Island Loop	3	0	90.1	Low	3	0	0
Contraband Bayou	3	1	77.9	Low	2	0	1
Coon Island Loop	5	1	81.2	Low	4	0	1
Overall UCR AOC	15	3	81.7	Low	12	0	3
<i>Bayou d'Inde AOC</i>							
Upper Bayou d'Inde	2	1	64.0	Low	1	0	1
Middle Bayou d'Inde	3	1	73.2	Low	2	0	1
Lower Bayou d'Inde - Mainstem	2	0	87.9	Low	2	0	0
Lower Bayou d'Inde - Lockport Marsh	6	2	66.0	Low	4	0	2
PPG Canal	2	0	86.0	Low	2	0	0
Overall BI AOC	15	4	72.8	Low	11	0	4
<i>Middle Calcasieu River AOC</i>							
Middle Calcasieu River - Mainstem	0	NA	NA	NA	NA	NA	NA
Prien Lake and upper old river channel	2	0	96.8	Low	2	0	0
Indian Wells Lagoon	2	1	34.1	High	1	0	1
Bayou Olsen	2	0	95.1	Low	2	0	0
Moss Lake	2	0	93.8	Low	2	0	0
Overall MCR AOC	8	1	80.0	Low	7	0	1
<i>AOC Subtotal</i>	38	8	77.8	Low	30	0	8

Table D-21. Observed magnitude of toxicity to aquatic plants exposed to pore water from the Calcasieu Estuary, based on the results of 96-hour pore-water toxicity tests with the alga, *Ulva fasciata*, based on germination.

Area of Concern (AOC)/Reach	n	Number of Toxic Samples	Average Germination (%)	Risk to the Aquatic Plant Community ¹	Observed Magnitude of Toxicity ²		
					Number of Samples/Risk Category	Low	Indeterminate
<i>Reference Areas</i>							
Bayou Choupique	2	0	93.2	Low	2	0	0
Grand Bayou	2	0	90.5	Low	2	0	0
Bayou Bois Connine	1	0	86.6	Low	1	0	0
Johnson Bayou	1	1	72.4	Low	1	0	0
Willow Bayou	1	0	93.6	Low	1	0	0
Overall Reference Areas	7	1	88.6	Low	7	0	0
<i>Entire Estuary</i>	45	9	79.5	Low	37	0	8

n = number of samples; NA = not applicable; LCL = lower confidence limit.

¹Risk to the Aquatic Plant Community:

Low: Observed percent germination in reach is <10% lower than the observed percent germination for selected reference samples (i.e., >60.0%).

Indeterminate: Observed percent germination in reach is 10 to 20% lower than the observed percent germination for selected reference samples (i.e., 53.4 to 60.0%).

High: Observed percent germination in reach is >20% lower than the observed percent germination for selected reference samples (i.e., <53.4%).

²Observed Magnitude of Toxicity

Low: Observed percent germination in toxicity tests is >60.0% (i.e., < 10% change from the 95th LCL of observed percent germination in selected reference samples).

Indeterminate: Observed percent germination in toxicity tests is 53.4 to 60.0% (i.e., 10-20% change from the 95th LCL of observed percent germination in selected reference samples).

High: Observed percent germination in toxicity tests is <53.4% (i.e., > 20% change from the 95th LCL of observed percent germination in selected reference samples).

Table D-22. Comparison of the concentrations of chemicals of potential concern in surface water from each area of concern (AOC) to the selected benchmarks for assessing surface-water chemistry relative to the potential for adverse effects on aquatic plants.

Chemicals of Potential Concern (COPCs)	Selected Benchmarks ¹	95th Percentile Concentration (% Samples Exceeding Benchmark; Number of Samples) ²					
		Upper Calcasieu River AOC		Bayou d'Inde AOC		Middle Calcasieu River AOC	
Conventional (mg/L)							
Hydrogen sulfide	0.002	ND	ND	ND	ND	ND	ND
Nitrogen, as ammonia	2.4	0.472	(0%; 4)	<u>3.37</u>	<u>(29%; 7)</u>	0.437	(0%; 4)
Total dissolved sulfide	NG	ND	ND	ND	ND	ND	ND
Ammonia - toxic units (no units)	1	0.164	(0%; 2)	0.825	(0%, 7)	0.384	(0%; 4)
Metals (µg/L)							
Chromium, total	397	2.70	(0%; 12)	25.0	(0%; 21)	2.15	(0%; 16)
Chromium, dissolved	397	2.70	(0%; 12)	14.2	(0%; 21)	2.15	(0%; 22)
Copper, total	1	<u>7.54</u>	<u>(100%; 12)</u>	<u>16.1</u>	<u>(100%; 21)</u>	<u>16.5</u>	<u>(100%; 22)</u>
Copper, dissolved	1	<u>6.77</u>	<u>(100%; 12)</u>	<u>22.6</u>	<u>(100%; 21)</u>	<u>9.82</u>	<u>(100%; 22)</u>
Lead, total	500	14.1	(0%; 12)	2.70	(0%; 21)	1.05	(0%; 22)
Lead, dissolved	500	5.70	(0%; 12)	1.05	(0%; 21)	1.05	(0%; 22)
Mercury, total	5	0.0800	(0%; 12)	0.170	(0%; 21)	0.100	(0%; 22)
Mercury, dissolved	5	0.0800	(0%; 12)	0.0780	(0%; 21)	0.0500	(0%; 22)
Methyl mercury	0.8	ND	ND	ND	ND	ND	ND
Nickel, total	5	<u>17.6</u>	<u>(67%; 12)</u>	<u>25.6</u>	<u>(38%; 21)</u>	<u>16.8</u>	<u>(9%; 22)</u>
Nickel, dissolved	5	<u>17.6</u>	<u>(33%; 12)</u>	<u>17.4</u>	<u>(29%; 21)</u>	<u>17.4</u>	<u>(36%; 22)</u>
Zinc, total	30	5.33	(0%; 12)	18.2	(5%; 21)	24.7	(6%; 16)
Zinc, dissolved	30	24.9	(0%; 12)	11.0	(0%; 21)	27.5	(5%; 22)
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)							
1,1'-Biphenyl	14	5.00	(0%; 8)	5.00	(0%; 21)	5.00	(0%; 22)
1-Methylnaphthalene	21	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	NG	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	NG	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	4.2	0.700	(0%; 4)	NA	NA	NA	NA
Acenaphthene	520	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
Acenaphthylene	NG	5.00	(NG; 12)	5.00	(NG; 21)	5.00	(NG; 22)
Anthracene	0.73	NA	NA	NA	NA	NA	NA

Table D-22. Comparison of the concentrations of chemicals of potential concern in surface water from each area of concern (AOC) to the selected benchmarks for assessing surface-water chemistry relative to the potential for adverse effects on aquatic plants.

Chemicals of Potential Concern (COPCs)	Selected Benchmarks ¹	95th Percentile Concentration (% Samples Exceeding Benchmark; Number of Samples) ²					
		Upper Calcasieu River AOC		Bayou d'Inde AOC		Middle Calcasieu River AOC	
PAHs (µg/L; cont.)							
Fluorene	3.9	1.10	(0%; 4)	NA	NA	NA	NA
Naphthalene	33000	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
Phenanthrene	8.3	0.700	(0%; 4)	NA	NA	NA	NA
Benz(a)anthracene	0.027	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.014	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	60	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
Benzo(g,h,i)perylene	60	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
Benzo(k)fluoranthene	60	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
Chrysene	60	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
Dibenz(a,h)anthracene	60	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
Fluoranthene	54400	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
Indeno(1,2,3-cd)pyrene	60	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
Perylene	NG	ND	ND	ND	ND	ND	ND
Pyrene	60	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
PCB Aroclors (µg/L)							
Aroclor-1016	0.03	NA	NA	NA	NA	NA	NA
Aroclor-1221	0.28	0.0950	(0%; 4)	NA	NA	NA	NA
Aroclor-1232	0.58	0.0950	(0%; 4)	NA	NA	NA	NA
Aroclor-1242	300	0.0950	(0%; 4)	NA	NA	NA	NA
Aroclor-1248	0.081	NA	NA	NA	NA	NA	NA
Aroclor-1254	0.1	NA	NA	0.210	(100%; 1)	NA	NA
Aroclor-1260	94	0.500	(0%; 12)	0.500	(0%; 21)	0.500	(0%; 22)
Total PCBs	0.144	NA	NA	0.665	(100%; 1)	NA	NA
Organochlorine Pesticides (µg/L)							
Aldrin	0.26	0.0250	(0%; 12)	0.0250	(0%; 21)	0.025	(0%; 22)
Dieldrin	0.11	0.0500	(0%; 12)	0.0500	(0%; 21)	0.050	(0%; 22)

Table D-22. Comparison of the concentrations of chemicals of potential concern in surface water from each area of concern (AOC) to the selected benchmarks for assessing surface-water chemistry relative to the potential for adverse effects on aquatic plants.

Chemicals of Potential Concern (COPCs)	Selected Benchmarks ¹	95th Percentile Concentration (% Samples Exceeding Benchmark; Number of Samples) ²					
		Upper Calcasieu River AOC		Bayou d'Inde AOC		Middle Calcasieu River AOC	
<i>Phthalates (µg/L)</i>							
Bis(2-ethylhexyl)phthalate	3.0	2.00	(0%; 3)	NA	NA	<u>3.70</u>	<u>(8%; 13)</u>
<i>Chlorinated Benzenes (µg/L)</i>							
Hexachloro-1,3-butadiene	0.32	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	129	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
1,2,3,4-Tetrachlorobenzene	NG	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	5	0.600	(0%; 4)	NA	NA	NA	NA
1,2,4,5-Tetrachlorobenzene	129	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	0.600	(0%; 4)	NA	NA	NA	NA
1,2-Dichlorobenzene	5	0.600	(0%; 4)	NA	NA	NA	NA
1,3-Dichlorobenzene	5	0.650	(0%; 4)	NA	NA	NA	NA
1,4-Dichlorobenzene	5	0.650	(0%; 4)	NA	NA	NA	NA
Pentachlorobenzene	129	ND	ND	ND	ND	ND	ND
<i>Chlorinated Ethanes (µg/L)</i>							
1,1,1-Trichloroethane	1560	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
1,2-Dichloroethane	5650	5.00	(0%; 12)	5.00	(0%; 21)	5.00	(0%; 22)
<i>Other COPCs (µg/L)</i>							
Acetone	1500	5.00	(0%; 8)	20.0	(0%; 21)	5.00	(0%; 22)
Carbon disulfide	0.92	NA	NA	<u>1.88</u>	<u>(100%; 3)</u>	NA	NA

NA = not applicable (was measured but all values were screened out or was not measured in the reach); ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls; NG = no guideline available.

¹Refer to Table D-2 for a complete description of the selected benchmarks.

²Substances for which the 95th percentile concentration for an AOC is higher than the selected benchmark (highlighted with bold and underline) were retained as preliminary contaminants of concern (COC).

Table D-23. Identification of contaminants of concern (COCs) in the Upper Calcasieu River Area of Concern (UCR AOC) relative to risks to the aquatic plant community due to exposure to surface water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Overall COC ³
<i>Conventionals (mg/L)</i>			
Hydrogen sulfide	ND	ND	ND
Nitrogen, as ammonia	N	N	N
Total dissolved sulfide	ND	U	U
Ammonia - toxic units (no units)	N	N	N
<i>Metals (µg/L)</i>			
Chromium, total	Y	N	N
Chromium, dissolved	Y	N	N
Copper, total	N	Y	N
Copper, dissolved	N	Y	N
Lead, total	N	N	N
Lead, dissolved	Y	N	N
Mercury, total	N	N	N
Mercury, dissolved	N	N	N
Methyl mercury	ND	ND	ND
Nickel, total	Y	Y	Y
Nickel, dissolved	Y	Y	Y
Zinc, total	N	N	N
Zinc, dissolved	N	N	N
<i>Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)</i>			
1,1'-Biphenyl	N	N	N
1-Methylnaphthalene	ND	ND	ND
1-Methylphenanthrene	ND	U	U
2,6-Dimethylnaphthalene	ND	U	U
2-Methylnaphthalene	N	N	N
Acenaphthene	N	N	N
Acenaphthylene	N	U	N
Anthracene	U	U	U
Fluorene	N	N	N
Naphthalene	N	N	N
Phenanthrene	N	N	N
Benz(a)anthracene	U	U	U
Benzo(a)pyrene	U	U	U
Benzo(b)fluoranthene	N	N	N
Benzo(g,h,i)perylene	N	N	N
Benzo(k)fluoranthene	N	N	N
Chrysene	N	N	N
Dibenz(a,h)anthracene	N	N	N

Table D-23. Identification of contaminants of concern (COCs) in the Upper Calcasieu River Area of Concern (UCR AOC) relative to risks to the aquatic plant community due to exposure to surface water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Overall COC ³
<i>PAHs (µg/L; cont.)</i>			
Fluoranthene	N	N	N
Indeno(1,2,3-cd)pyrene	N	N	N
Perylene	ND	U	U
Pyrene	N	N	N
<i>PCB Aroclors (µg/L)</i>			
Aroclor-1016	U	U	U
Aroclor-1221	N	N	N
Aroclor-1232	N	N	N
Aroclor-1242	N	N	N
Aroclor-1248	N	N	N
Aroclor-1254	U	U	U
Aroclor-1260	N	N	N
Total PCBs	U	U	U
<i>Organochlorine Pesticides (µg/L)</i>			
Aldrin	N	N	N
Dieldrin	N	N	N
<i>Phthalates (µg/L)</i>			
Bis(2-ethylhexyl)phthalate	N	N	N
<i>Chlorinated Benzenes (µg/L)</i>			
Hexachloro-1,3-butadiene	U	U	U
Hexachlorobenzene	N	N	N
1,2,3,4-Tetrachlorobenzene	ND	U	U
1,2,3-Trichlorobenzene	N	N	N
1,2,4,5-Tetrachlorobenzene	ND	ND	ND
1,2,4-Trichlorobenzene	N	N	N
1,2-Dichlorobenzene	N	N	N
1,3-Dichlorobenzene	N	N	N
1,4-Dichlorobenzene	N	N	N
Pentachlorobenzene	ND	ND	ND
<i>Chlorinated Ethanes (µg/L)</i>			
1,1,1-Trichloroethane	N	N	N
1,2-Dichloroethane	N	N	N

Table D-23. Identification of contaminants of concern (COCs) in the Upper Calcasieu River Area of Concern (UCR AOC) relative to risks to the aquatic plant community due to exposure to surface water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Overall COC ³
<i>Other COPCs (µg/L)</i>			
Acetone	N	N	N
Carbon disulfide	U	U	U

ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls.

¹See Table D-12 for a description of the procedures used to evaluate COPC concentrations relative to reference areas.

²See Table D-22 for a description of the procedures used to evaluate COPC concentrations relative to selected toxicity thresholds.

³See Table D-33 for an explanation of the criteria that were used to designate a COPC as a COC.

Y = Yes, retained as a COC for surface water.

N = No, not retained as a COC for surface water.

U = Uncertain, insufficient data are available to determine if the COPC should be retained as a COC for surface water.

Table D-24. Comparison of the concentrations of chemicals of potential concern in pore water from each area of concern (AOC) to the selected benchmarks for assessing pore-water chemistry relative to the potential for adverse effects on aquatic plants.

Chemicals of Potential Concern (COPCs)	Selected Benchmarks ¹	95th Percentile Concentration (% Samples Exceeding Benchmark; Number of Samples) ²					
		Upper Calcasieu River AOC	Bayou d'Inde AOC		Middle Calcasieu River AOC		
Conventionals (mg/L)							
Hydrogen sulfide	0.002	0.0191	(46%; 39)	0.0102	(87%; 31)	0.00580	(47%; 15)
Nitrogen, as ammonia	2.4	0.659	(3%; 39)	0.849	(0%; 31)	0.400	(0%; 15)
Total dissolved sulfide	NG	0.163	(NG; 39)	0.0760	(NG; 31)	0.106	(NG; 15)
Ammonia - toxic units (no units)	1	0.320	(3%; 39)	0.349	(0%; 31)	0.144	(0%; 15)
Metals (µg/L)							
Chromium, total	397	ND	ND	ND	ND	ND	ND
Chromium, dissolved	397	ND	ND	ND	ND	ND	ND
Copper, total	1	11.8	(80%; 5)	11.6	(100%; 7)	15.7	(100%; 2)
Copper, dissolved	1	11.7	(75%; 20)	8.84	(100%; 15)	7.48	(100%; 8)
Lead, total	500	0.958	(0%; 20)	1.10	(0%; 15)	1.03	(0%; 8)
Lead, dissolved	500	0.399	(0%; 20)	0.847	(0%; 15)	0.386	(0%; 8)
Mercury, total	5	ND	ND	ND	ND	ND	ND
Mercury, dissolved	5	ND	ND	ND	ND	ND	ND
Methyl mercury	0.8	ND	ND	ND	ND	ND	ND
Nickel, total	5	5.62	(33%; 18)	18.0	(80%; 15)	7.48	(67%; 3)
Nickel, dissolved	5	6.12	(40%; 20)	11.3	(93%; 15)	7.51	(50%; 8)
Zinc, total	30	8.36	(0%; 7)	91.4	(17%; 6)	12.1	(0%; 7)
Zinc, dissolved	30	753	(75%; 20)	1380	(93%; 15)	1100	(100%; 8)
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)							
1,1'-Biphenyl	14	0.00391	(0%; 20)	0.00793	(0%; 15)	0.0213	(0%; 8)
1-Methylnaphthalene	21	0.0102	(0%; 20)	0.0238	(0%; 15)	4.46	(0%; 8)
1-Methylphenanthrene	NG	0.00188	(NG; 20)	0.0350	(NG; 15)	0.561	(NG; 8)
2,6-Dimethylnaphthalene	NG	0.00752	(NG; 20)	0.0183	(NG; 15)	2.52	(NG; 8)
2-Methylnaphthalene	4.2	0.0111	(0%; 20)	0.0231	(0%; 15)	0.910	(0%; 8)
Acenaphthene	520	0.100	(0%; 20)	0.0958	(0%; 15)	0.533	(0%; 8)

Table D-24. Comparison of the concentrations of chemicals of potential concern in pore water from each area of concern (AOC) to the selected benchmarks for assessing pore-water chemistry relative to the potential for adverse effects on aquatic plants.

Chemicals of Potential Concern (COPCs)	Selected Benchmarks ¹	95th Percentile Concentration (% Samples Exceeding Benchmark; Number of Samples) ²					
		Upper Calcasieu River AOC		Bayou d'Inde AOC		Middle Calcasieu River AOC	
PAHs (µg/L; cont.)							
Acenaphthylene	NG	0.00324	(NG; 20)	0.0147	(NG; 15)	0.222	(NG; 8)
Anthracene	0.73	0.00561	(0%; 20)	0.0391	(0%; 15)	0.189	(0%; 8)
Fluorene	3.9	0.0146	(0%; 20)	0.0382	(0%; 15)	0.613	(0%; 8)
Naphthalene	33000	0.0269	(0%; 20)	0.0613	(0%; 15)	0.177	(0%; 8)
Phenanthrene	8.3	0.0335	(0%; 20)	0.0639	(0%; 15)	0.747	(0%; 8)
Benz(a)anthracene	0.027	0.00315	(0%; 20)	0.00886	(0%; 15)	0.199	(13%; 8)
Benzo(a)pyrene	0.014	0.00533	(0%; 20)	0.00590	(0%; 15)	0.116	(13%; 8)
Benzo(b)fluoranthene	60	0.00643	(0%; 20)	0.00824	(0%; 15)	0.0771	(0%; 8)
Benzo(g,h,i)perylene	60	0.00519	(0%; 20)	0.00673	(0%; 15)	0.0579	(0%; 8)
Benzo(k)fluoranthene	60	0.00161	(0%; 20)	0.00129	(0%; 15)	0.0149	(0%; 8)
Chrysene	60	0.00368	(0%; 20)	0.0652	(0%; 15)	0.366	(0%; 8)
Dibenz(a,h)anthracene	60	0.00185	(0%; 20)	0.00248	(0%; 15)	0.0306	(0%; 8)
Fluoranthene	54400	0.0201	(0%; 20)	0.0251	(0%; 15)	0.0805	(0%; 8)
Indeno(1,2,3-cd)pyrene	60	0.00243	(0%; 20)	0.00155	(0%; 15)	0.0185	(0%; 8)
Perylene	NG	0.0125	(NG; 20)	0.00870	(NG; 15)	0.0178	(NG; 8)
Pyrene	60	0.0226	(0%; 20)	0.0790	(0%; 15)	0.377	(0%; 8)
PCB Aroclors (µg/L)							
Aroclor-1016	0.03	NA	NA	NA	NA	NA	NA
Aroclor-1221	0.28	0.0500	(0%; 20)	0.0500	(0%; 15)	0.0500	(0%; 7)
Aroclor-1232	0.58	0.0500	(0%; 20)	0.0500	(0%; 15)	0.0500	(0%; 7)
Aroclor-1242	300	0.0500	(0%; 20)	0.0500	(0%; 15)	0.0500	(0%; 7)
Aroclor-1248	0.081	NA	NA	NA	NA	NA	NA
Aroclor-1254	0.1	NA	NA	NA	NA	NA	NA
Aroclor-1260	94	0.0500	(0%; 20)	0.0500	(0%; 15)	0.0500	(0%; 7)

Table D-24. Comparison of the concentrations of chemicals of potential concern in pore water from each area of concern (AOC) to the selected benchmarks for assessing pore-water chemistry relative to the potential for adverse effects on aquatic plants.

Chemicals of Potential Concern (COPCs)	Selected Benchmarks ¹	95th Percentile Concentration (% Samples Exceeding Benchmark; Number of Samples) ²					
		Upper Calcasieu River AOC		Bayou d'Inde AOC		Middle Calcasieu River AOC	
PCB Congeners ($\mu\text{g}/\text{L}$)							
PCB 105	NG	0.00496	(NG; 20)	0.0207	(NG; 15)	0.00107	(NG; 8)
PCB 118	NG	0.000982	(NG; 20)	0.00293	(NG; 15)	0.00775	(NG; 8)
PCB 128	NG	0.0000935	(NG; 20)	0.000289	(NG; 15)	0.00109	(NG; 8)
PCB 132/153	NG	0.000302	(NG; 20)	0.000425	(NG; 15)	0.00650	(NG; 8)
PCB 138/160	NG	0.0234	(NG; 20)	0.0629	(NG; 15)	0.0361	(NG; 8)
PCB 170/190	NG	0.000518	(NG; 20)	0.000270	(NG; 15)	0.0301	(NG; 8)
PCB 18/17	NG	0.00491	(NG; 20)	0.0199	(NG; 15)	0.0159	(NG; 8)
PCB 180	NG	0.00139	(NG; 20)	0.00189	(NG; 15)	0.00382	(NG; 8)
PCB 187	NG	0.00191	(NG; 20)	0.00332	(NG; 15)	0.00565	(NG; 8)
PCB 195/208	NG	0.0000985	(NG; 20)	0.000175	(NG; 15)	0.000130	(NG; 8)
PCB 206	NG	0.000134	(NG; 20)	0.000205	(NG; 15)	0.000961	(NG; 8)
PCB 209	NG	0.000287	(NG; 20)	0.00118	(NG; 15)	0.000155	(NG; 8)
PCB 28	NG	0.00346	(NG; 20)	0.00106	(NG; 15)	0.0279	(NG; 8)
PCB 29	NG	0.00265	(NG; 20)	0.000715	(NG; 15)	0.00282	(NG; 8)
PCB 44	NG	0.00261	(NG; 20)	0.00129	(NG; 15)	0.00204	(NG; 8)
PCB 5/8	NG	0.0242	(NG; 20)	0.0154	(NG; 15)	0.120	(NG; 8)
PCB 52	NG	0.00571	(NG; 20)	0.00434	(NG; 15)	0.0190	(NG; 8)
PCB 66	NG	0.0000985	(NG; 20)	0.000907	(NG; 15)	0.000747	(NG; 8)
PCB 77/110	NG	0.000391	(NG; 20)	0.00120	(NG; 15)	0.023	(NG; 8)
PCB 87/115	NG	0.00339	(NG; 20)	0.00125	(NG; 15)	0.000892	(NG; 8)
PCB 90/101	NG	0.000288	(NG; 20)	0.000863	(NG; 15)	0.00197	(NG; 8)
PCB 201/157/173	NG	0.000121	(NG; 20)	0.000210	(NG; 15)	0.000257	(NG; 8)
Total PCBs	0.144	0.0515	(0%; 20)	0.125	(0%; 15)	<u>0.263</u>	<u>(25%; 8)</u>
Organochlorine Pesticides ($\mu\text{g}/\text{L}$)							
Aldrin	0.26	0.0000510	(0%; 20)	0.000815	(0%; 15)	0.0151	(0%; 8)
Dieldrin	0.11	0.0000740	(0%; 20)	0.000297	(0%; 15)	0.0000950	(0%; 8)

Table D-24. Comparison of the concentrations of chemicals of potential concern in pore water from each area of concern (AOC) to the selected benchmarks for assessing pore-water chemistry relative to the potential for adverse effects on aquatic plants.

Chemicals of Potential Concern (COPCs)	Selected Benchmarks ¹	95th Percentile Concentration (% Samples Exceeding Benchmark; Number of Samples) ²					
		Upper Calcasieu River AOC		Bayou d'Inde AOC		Middle Calcasieu River AOC	
<i>Phthalates (µg/L)</i>							
Bis(2-ethylhexyl)phthalate	3.0	ND	ND	ND	ND	ND	ND
<i>Chlorinated Benzenes (µg/L)</i>							
Hexachloro-1,3-butadiene	0.32	0.0750	(0%; 20)	0.0750	(0%; 15)	0.0750	(0%; 8)
Hexachlorobenzene	129	0.00412	(0%; 20)	0.00841	(0%; 15)	0.0104	(0%; 8)
1,2,3,4-Tetrachlorobenzene	NG	0.0209	(NG; 20)	0.0182	(NG; 15)	0.0364	(NG; 8)
1,2,3-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	129	0.0144	(0%; 20)	0.00741	(0%; 15)	0.0194	(0%; 8)
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	129	0.00303	(0%; 20)	0.00392	(0%; 15)	0.0103	(0%; 8)
<i>Chlorinated Ethanes (µg/L)</i>							
1,1,1-Trichloroethane	1560	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	5650	ND	ND	ND	ND	ND	ND
<i>Other COPCs (µg/L)</i>							
Acetone	1500	ND	ND	ND	ND	ND	ND
Carbon disulfide	0.92	ND	ND	ND	ND	ND	ND

NA = not applicable (was measured but all values were screened out or was not measured in the reach); ND = no data (i.e., the substance was not measured at all in the estuary);

PCBs = polychlorinated biphenyls; NG = no guideline available; COC = contaminant of concern.

¹Refer to Table D-2 for a complete description of the selected benchmarks.

²Substances for which the 95th percentile concentration for an AOC is higher than the selected benchmark (highlighted with bold and underline) were retained as preliminary COCs.

Table D-25. Comparison of the distributions of the effects and no effects data for 96-hour pore-water toxicity tests with the alga, *Ulva fasciata*, based on the germling cell number, length or zoospore germination.

Chemicals of Potential Concern (COPCs)	Effects Distribution ¹		No Effects Distribution ²		Ratio of Effects to No Effects	Ratio > 2? ³
	n	75th Percentile Concentration	n	75th Percentile Concentration		
Conventionals (mg/L)						
Hydrogen sulfide	9	0.00557	41	0.00391	1.4	N
Nitrogen, as ammonia	9	0.600	41	0.400	1.5	N
Total dissolved sulfide	9	0.0420	41	0.0430	1.0	N
Ammonia - toxic units (no units)	9	0.185	41	0.143	1.3	N
Metals (µg/L)						
Chromium, total	ND	ND	ND	ND	ND	ND
Chromium, dissolved	ND	ND	ND	ND	ND	ND
Copper, total	3	14.9	14	10.2	1.5	N
Copper, dissolved	9	4.42	41	6.89	0.6	N
Lead, total	9	0.910	41	0.900	1.0	N
Lead, dissolved	9	0.360	41	0.340	1.1	N
Mercury, total	ND	ND	ND	ND	ND	ND
Mercury, dissolved	ND	ND	ND	ND	ND	ND
Methyl mercury	ND	ND	ND	ND	ND	ND
Nickel, total	8	8.44	31	6.90	1.2	N
Nickel, dissolved	9	8.47	41	6.04	1.4	N
Zinc, total	4	14.5	20	7.81	1.9	N
Zinc, dissolved	9	398	41	632	0.6	N
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)						
1,1'-Biphenyl	9	0.00470	41	0.00380	1.2	N
1-Methylnaphthalene	9	0.00780	41	0.0114	0.7	N
1-Methylphenanthrene	9	0.00800	41	0.00340	2.4	Y
2,6-Dimethylnaphthalene	9	0.00500	41	0.00610	0.8	N
2-Methylnaphthalene	9	0.00940	41	0.0124	0.8	N
Acenaphthene	9	0.0257	41	0.0241	1.1	N
Acenaphthylene	9	0.00200	41	0.00380	0.5	N
Anthracene	9	0.00410	41	0.00530	0.8	N
Fluorene	9	0.0240	41	0.0162	1.5	N
Naphthalene	9	0.0213	41	0.0215	1.0	N
Phenanthrene	9	0.0421	41	0.0340	1.2	N
Benz(a)anthracene	9	0.00350	41	0.00140	2.5	Y
Benzo(a)pyrene	9	0.00100	41	0.00130	0.8	N
Benzo(b)fluoranthene	9	0.00460	41	0.00250	1.8	N
Benzo(g,h,i)perylene	9	0.000700	41	0.00120	0.6	N
Benzo(k)fluoranthene	9	0.000900	41	0.00100	0.9	N
Chrysene	9	0.0105	41	0.00410	2.6	Y

Table D-25. Comparison of the distributions of the effects and no effects data for 96-hour pore-water toxicity tests with the alga, *Ulva fasciata*, based on the germling cell number, length or zoospore germination.

Chemicals of Potential Concern (COPCs)	Effects Distribution ¹		No Effects Distribution ²		Ratio of Effects to No Effects	Ratio > 2? ³
	n	75th Percentile Concentration	n	75th Percentile Concentration		
PAHs ($\mu\text{g/L}$; cont.)						
Dibenz(a,h)anthracene	9	0.000700	41	0.000600	1.2	N
Fluoranthene	9	0.0192	41	0.0132	1.5	N
Indeno(1,2,3-cd)pyrene	9	0.000300	41	0.000800	0.4	N
Perylene	9	0.00350	41	0.00270	1.3	N
Pyrene	9	0.0135	41	0.0118	1.1	N
PCB Aroclors ($\mu\text{g/L}$)						
Aroclor-1016	0	NA	0	NA	NA	U
Aroclor-1221	9	0.0500	40	0.0500	1.0	N
Aroclor-1232	9	0.0500	40	0.0500	1.0	N
Aroclor-1242	9	0.0500	40	0.0500	1.0	N
Aroclor-1248	0	NA	0	NA	NA	U
Aroclor-1254	0	NA	0	NA	NA	U
Aroclor-1260	9	0.0500	40	0.0500	1.0	N
PCB Congeners ($\mu\text{g/L}$)						
PCB 105	9	0.000115	41	0.00145	0.1	N
PCB 118	9	0.000570	41	0.000760	0.7	N
PCB 128	9	0.000125	41	0.0000700	1.8	N
PCB 132/153	9	0.000175	41	0.000100	1.8	N
PCB 138/160	9	0.00930	41	0.0124	0.8	N
PCB 170/190	9	0.000205	41	0.000115	1.8	N
PCB 18/17	9	0.000390	41	0.00422	0.1	N
PCB 180	9	0.000510	41	0.00101	0.5	N
PCB 187	9	0.000200	41	0.000590	0.3	N
PCB 195/208	9	0.000130	41	0.0000750	1.7	N
PCB 206	9	0.000145	41	0.000130	1.1	N
PCB 209	9	0.000155	41	0.000105	1.5	N
PCB 28	9	0.000120	41	0.00293	0.04	N
PCB 29	9	0.0000700	41	0.000340	0.2	N
PCB 44	9	0.000180	41	0.000860	0.2	N
PCB 5/8	9	0.00790	41	0.0117	0.7	N
PCB 52	9	0.00123	41	0.00268	0.5	N
PCB 66	9	0.000130	41	0.0000750	1.7	N
PCB 77/110	9	0.000920	41	0.000380	2.4	Y
PCB 87/115	9	0.000115	41	0.000115	1.0	N
PCB 90/101	9	0.000260	41	0.000155	1.7	N
PCB 201/157/173	9	0.000160	41	0.0000900	1.8	N
Total PCBs	9	0.0291	41	0.0496	0.6	N

Table D-25. Comparison of the distributions of the effects and no effects data for 96-hour pore-water toxicity tests with the alga, *Ulva fasciata*, based on the germling cell number, length or zoospore germination.

Chemicals of Potential Concern (COPCs)	Effects Distribution ¹		No Effects Distribution ²		Ratio of Effects to No Effects	Ratio > 2? ³
	n	75th Percentile Concentration	n	75th Percentile Concentration		
<i>Organochlorine Pesticides (µg/L)</i>						
Aldrin	9	0.0000650	41	0.0000450	1.4	N
Dieldrin	9	0.0000950	41	0.0000550	1.7	N
<i>Phthalates (µg/L)</i>						
Bis(2-ethylhexyl)phthalate	ND	ND	ND	ND	ND	ND
<i>Chlorinated Benzenes (µg/L)</i>						
Hexachloro-1,3-butadiene	9	0.0750	41	0.0750	1.0	N
Hexachlorobenzene	9	0.00236	41	0.00349	0.7	N
1,2,3,4-Tetrachlorobenzene	9	0.00349	41	0.0136	0.3	N
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	9	0.00488	41	0.00386	1.3	N
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	9	0.00121	41	0.00182	0.7	N
<i>Chlorinated Ethanes (µg/L)</i>						
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
<i>Other COPCs (µg/L)</i>						
Acetone	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND	ND	ND

NA = not applicable (was measured but all values were screened out or was not measured in the reach); ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls; DL = detection limit; n = number of samples.

¹Includes all samples that were designated as toxic to algae using the reference envelope approach.

²Includes all samples that were designated as not toxic to algae using the reference envelope approach.

³Y = Yes, the ratio of the effects to no effects data is greater than two.

N = No, the ratio of the effects to no effects data is not greater than two.

U = Uncertain; if a 75th percentile concentration could not be calculated for the effects dataset (or both the effects and no effects datasets), because of high non-detect data (i.e., NA in table), the substance was considered to be Uncertain.

Table D-26. Identification of contaminants of concern (COCs) in the Upper Calcasieu River Area of Concern (UCR AOC) relative to risks to the aquatic plant community due to exposure to pore water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Effects/No Effects Distribution ³	Overall COC ⁴
<i>Conventionals (mg/L)</i>				
Hydrogen sulfide	Y	Y	N	N
Nitrogen, as ammonia	N	N	N	N
Total dissolved sulfide	Y	U	N	N
Ammonia - toxic units (no units)	N	N	N	N
<i>Metals (µg/L)</i>				
Chromium, total	ND	ND	ND	ND
Chromium, dissolved	ND	ND	ND	ND
Copper, total	N	Y	N	N
Copper, dissolved	N	Y	N	N
Lead, total	N	N	N	N
Lead, dissolved	N	N	N	N
Mercury, total	ND	ND	ND	ND
Mercury, dissolved	ND	ND	ND	ND
Methyl mercury	ND	ND	ND	ND
Nickel, total	N	Y	N	N
Nickel, dissolved	N	Y	N	N
Zinc, total	N	N	N	N
Zinc, dissolved	N	Y	N	N
<i>Polyyclic Aromatic Hydrocarbons (PAHs; µg/L)</i>				
1,1'-Biphenyl	N	N	N	N
1-Methylnaphthalene	N	N	N	N
1-Methylphenanthrene	N	U	Y	N
2,6-Dimethylnaphthalene	N	U	N	N
2-Methylnaphthalene	N	N	N	N
Acenaphthene	Y	N	N	N
Acenaphthylene	N	U	N	N
Anthracene	Y	N	N	N
Fluorene	N	N	N	N
Naphthalene	N	N	N	N
Phenanthrene	N	N	N	N
Benz(a)anthracene	Y	N	Y	N
Benzo(a)pyrene	Y	N	N	N
Benzo(b)fluoranthene	N	N	N	N
Benzo(g,h,i)perylene	Y	N	N	N
Benzo(k)fluoranthene	N	N	N	N
Chrysene	N	N	Y	N
Dibenz(a,h)anthracene	Y	N	N	N
Fluoranthene	N	N	N	N

Table D-26. Identification of contaminants of concern (COCs) in the Upper Calcasieu River Area of Concern (UCR AOC) relative to risks to the aquatic plant community due to exposure to pore water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Effects/No Effects Distribution ³	Overall COC ⁴
<i>PAHs (µg/L; cont.)</i>				
Indeno(1,2,3-cd)pyrene	N	N	N	N
Perylene	Y	U	N	N
Pyrene	Y	N	N	N
<i>PCB Aroclors (µg/L)</i>				
Aroclor-1016	U	N	U	N
Aroclor-1221	N	N	N	N
Aroclor-1232	N	N	N	N
Aroclor-1242	N	N	N	N
Aroclor-1248	U	N	U	N
Aroclor-1254	U	N	U	N
Aroclor-1260	N	N	N	N
<i>PCB Congeners (µg/L)</i>				
PCB 105	Y	U	N	N
PCB 118	Y	U	N	N
PCB 128	N	U	N	N
PCB 132/153	Y	U	N	N
PCB 138/160	Y	U	N	N
PCB 170/190	Y	U	N	N
PCB 18/17	Y	U	N	N
PCB 180	N	U	N	N
PCB 187	Y	U	N	N
PCB 195/208	N	U	N	N
PCB 206	N	U	N	N
PCB 209	N	U	N	N
PCB 28	N	U	N	N
PCB 29	Y	U	N	N
PCB 44	Y	U	N	N
PCB 5/8	N	U	N	N
PCB 52	Y	U	N	N
PCB 66	N	U	N	N
PCB 77/110	N	U	Y	N
PCB 87/115	Y	U	N	N
PCB 90/101	N	U	N	N
PCB 201,157/173	N	U	N	N
Total PCBs	N	N	N	N
<i>Organochlorine Pesticides (µg/L)</i>				
Aldrin	N	N	N	N
Dieldrin	N	N	N	N

Table D-26. Identification of contaminants of concern (COCs) in the Upper Calcasieu River Area of Concern (UCR AOC) relative to risks to the aquatic plant community due to exposure to pore water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Effects/No Effects Distribution ³	Overall COC ⁴
<i>Phthalates (µg/L)</i>				
Bis(2-ethylhexyl)phthalate	ND	ND	ND	ND
<i>Chlorinated Benzenes (µg/L)</i>				
Hexachloro-1,3-butadiene	N	N	N	N
Hexachlorobenzene	N	N	N	N
1,2,3,4-Tetrachlorobenzene	N	U	N	N
1,2,3-Trichlorobenzene	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	Y	N	N	N
1,2,4-Trichlorobenzene	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
Pentachlorobenzene	N	N	N	N
<i>Chlorinated Ethanes (µg/L)</i>				
1,1,1-Trichloroethane	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND
<i>Other COPCs (µg/L)</i>				
Acetone	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND

ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls.

¹See Table D-13 for a description of the procedures used to evaluate COPC concentrations relative to reference areas.

²See Table D-24 for a description of the procedures used to evaluate COPC concentrations relative to selected toxicity thresholds.

³See Table D-25 for a description of the procedures used to evaluate the distributions of the effects and no effects data.

⁴See Table D-33 for an explanation of the criteria that were used to designate a COPC as a COC.

Y = Yes, retained as a COC for pore water.

N = No, not retained as a COC for pore water.

U = Uncertain, insufficient data are available to determine if the COPC should be retained as a COC for pore water.

Table D-27. Identification of contaminants of concern (COCs) in the Bayou d'Inde Area of Concern (BI AOC) relative to risks to the aquatic plant community due to exposure to surface water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Overall COC ³
<i>Conventionals (mg/L)</i>			
Hydrogen sulfide	ND	ND	ND
Nitrogen, as ammonia	Y	Y	Y
Total dissolved sulfide	ND	U	U
Ammonia - toxic units (no units)	N	N	N
<i>Metals (µg/L)</i>			
Chromium, total	Y	N	N
Chromium, dissolved	Y	N	N
Copper, total	N	Y	N
Copper, dissolved	Y	Y	Y
Lead, total	N	N	N
Lead, dissolved	N	N	N
Mercury, total	Y	N	N
Mercury, dissolved	N	N	N
Methyl mercury	ND	ND	ND
Nickel, total	Y	Y	Y
Nickel, dissolved	Y	Y	Y
Zinc, total	N	N	N
Zinc, dissolved	N	N	N
<i>Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)</i>			
1,1'-Biphenyl	N	N	N
1-Methylnaphthalene	ND	ND	ND
1-Methylphenanthrene	ND	U	U
2,6-Dimethylnaphthalene	ND	U	U
2-Methylnaphthalene	U	U	U
Acenaphthene	N	N	N
Acenaphthylene	N	U	N
Anthracene	U	U	U
Fluorene	U	U	U
Naphthalene	N	N	N
Phenanthrene	U	U	U
Benz(a)anthracene	U	U	U
Benzo(a)pyrene	U	U	U
Benzo(b)fluoranthene	N	N	N
Benzo(g,h,i)perylene	N	N	N
Benzo(k)fluoranthene	N	N	N
Chrysene	N	N	N
Dibenz(a,h)anthracene	N	N	N

Table D-27. Identification of contaminants of concern (COCs) in the Bayou d'Inde Area of Concern (BI AOC) relative to risks to the aquatic plant community due to exposure to surface water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Overall COC ³
<i>PAHs (µg/L; cont.)</i>			
Fluoranthene	N	N	N
Indeno(1,2,3-cd)pyrene	N	N	N
Perylene	ND	U	U
Pyrene	N	N	N
<i>PCB Aroclors (µg/L)</i>			
Aroclor-1016	U	U	U
Aroclor-1221	U	U	U
Aroclor-1232	U	U	U
Aroclor-1242	U	U	U
Aroclor-1248	U	U	U
Aroclor-1254	N	Y	N
Aroclor-1260	N	N	N
Total PCBs	N	Y	N
<i>Organochlorine Pesticides (µg/L)</i>			
Aldrin	N	N	N
Dieldrin	N	N	N
<i>Phthalates (µg/L)</i>			
Bis(2-ethylhexyl)phthalate	U	U	U
<i>Chlorinated Benzenes (µg/L)</i>			
Hexachloro-1,3-butadiene	U	U	U
Hexachlorobenzene	N	N	N
1,2,3,4-Tetrachlorobenzene	ND	U	U
1,2,3-Trichlorobenzene	U	U	U
1,2,4,5-Tetrachlorobenzene	ND	ND	ND
1,2,4-Trichlorobenzene	U	U	U
1,2-Dichlorobenzene	U	U	U
1,3-Dichlorobenzene	U	U	U
1,4-Dichlorobenzene	U	U	U
Pentachlorobenzene	ND	ND	ND
<i>Chlorinated Ethanes (µg/L)</i>			
1,1,1-Trichloroethane	N	N	N
1,2-Dichloroethane	N	N	N

Table D-27. Identification of contaminants of concern (COCs) in the Bayou d'Inde Area of Concern (BI AOC) relative to risks to the aquatic plant community due to exposure to surface water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Overall COC ³
<i>Other COPCs (µg/L)</i>			
Acetone	Y	N	N
Carbon disulfide	N	Y	N

ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls.

¹See Table D-12 for a description of the procedures used to evaluate COPC concentrations relative to reference areas.

²See Table D-22 for a description of the procedures used to evaluate COPC concentrations relative to selected toxicity thresholds.

³See Table D-33 for an explanation of the criteria that were used to designate a COPC as a COC.

Y = Yes, retained as a COC for surface water.

N = No, not retained as a COC for surface water.

U = Uncertain, insufficient data are available to determine if the COPC should be retained as a COC for surface water.

Table D-28. Identification of contaminants of concern (COCs) in the Bayou d'Inde Area of Concern (BI AOC) relative to risks to the aquatic plant community due to exposure to pore water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Effects/No Effects Distribution ³	Overall COC ⁴
Conventionals (mg/L)				
Hydrogen sulfide	Y	Y	N	N
Nitrogen, as ammonia	Y	N	N	N
Total dissolved sulfide	N	U	N	N
Ammonia - toxic units (no units)	N	N	N	N
Metals (µg/L)				
Chromium, total	ND	ND	ND	ND
Chromium, dissolved	ND	ND	ND	ND
Copper, total	N	Y	N	N
Copper, dissolved	N	Y	N	N
Lead, total	N	N	N	N
Lead, dissolved	Y	N	N	N
Mercury, total	ND	ND	ND	ND
Mercury, dissolved	ND	ND	ND	ND
Methyl mercury	ND	ND	ND	ND
Nickel, total	Y	Y	N	N
Nickel, dissolved	Y	Y	N	N
Zinc, total	Y	Y	N	N
Zinc, dissolved	Y	Y	N	N
Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)				
1,1'-Biphenyl	Y	N	N	N
1-Methylnaphthalene	N	N	N	N
1-Methylphenanthrene	Y	U	Y	U
2,6-Dimethylnaphthalene	Y	U	N	N
2-Methylnaphthalene	N	N	N	N
Acenaphthene	Y	N	N	N
Acenaphthylene	Y	U	N	N
Anthracene	Y	N	N	N
Fluorene	Y	N	N	N
Naphthalene	Y	N	N	N
Phenanthrene	N	N	N	N
Benz(a)anthracene	Y	N	Y	N
Benzo(a)pyrene	Y	N	N	N
Benzo(b)fluoranthene	N	N	N	N
Benzo(g,h,i)perylene	Y	N	N	N
Benzo(k)fluoranthene	N	N	N	N
Chrysene	Y	N	Y	N
Dibenz(a,h)anthracene	Y	N	N	N
Fluoranthene	N	N	N	N

Table D-28. Identification of contaminants of concern (COCs) in the Bayou d'Inde Area of Concern (BI AOC) relative to risks to the aquatic plant community due to exposure to pore water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Effects/No Effects Distribution ³	Overall COC ⁴
<i>PAHs (µg/L; cont.)</i>				
Indeno(1,2,3-cd)pyrene	N	N	N	N
Perylene	Y	U	N	N
Pyrene	Y	N	N	N
<i>PCB Aroclors (µg/L)</i>				
Aroclor-1016	U	N	U	N
Aroclor-1221	N	N	N	N
Aroclor-1232	N	N	N	N
Aroclor-1242	N	N	N	N
Aroclor-1248	U	N	U	N
Aroclor-1254	U	N	U	N
Aroclor-1260	N	N	N	N
<i>PCB Congeners (µg/L)</i>				
PCB 105	Y	U	N	N
PCB 118	Y	U	N	N
PCB 128	Y	U	N	N
PCB 132/153	Y	U	N	N
PCB 138/160	Y	U	N	N
PCB 170/190	Y	U	N	N
PCB 18/17	Y	U	N	N
PCB 180	N	U	N	N
PCB 187	Y	U	N	N
PCB 195/208	Y	U	N	N
PCB 206	N	U	N	N
PCB 209	Y	U	N	N
PCB 28	N	U	N	N
PCB 29	Y	U	N	N
PCB 44	Y	U	N	N
PCB 5/8	N	U	N	N
PCB 52	N	U	N	N
PCB 66	Y	U	N	N
PCB 77/110	N	U	Y	N
PCB 87/115	Y	U	N	N
PCB 90/101	N	U	N	N
PCB 201/157/173	Y	U	N	N
Total PCBs	Y	N	N	N
<i>Organochlorine Pesticides (µg/L)</i>				
Aldrin	Y	N	N	N
Dieldrin	Y	N	N	N

Table D-28. Identification of contaminants of concern (COCs) in the Bayou d'Inde Area of Concern (BI AOC) relative to risks to the aquatic plant community due to exposure to pore water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Effects/No Effects Distribution ³	Overall COC ⁴
<i>Phthalates (µg/L)</i>				
Bis(2-ethylhexyl)phthalate	ND	ND	ND	ND
<i>Chlorinated Benzenes (µg/L)</i>				
Hexachloro-1,3-butadiene	N	N	N	N
Hexachlorobenzene	Y	N	N	N
1,2,3,4-Tetrachlorobenzene	N	U	N	N
1,2,3-Trichlorobenzene	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	N	N	N	N
1,2,4-Trichlorobenzene	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
Pentachlorobenzene	N	N	N	N
<i>Chlorinated Ethanes (µg/L)</i>				
1,1,1-Trichloroethane	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND
<i>Other COPCs (µg/L)</i>				
Acetone	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND

ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls.

¹See Table D-13 for a description of the procedures used to evaluate COPC concentrations relative to reference areas.

²See Table D-24 for a description of the procedures used to evaluate COPC concentrations relative to selected toxicity thresholds.

³See Table D-25 for a description of the procedures used to evaluate the distributions of the effects and no effects data.

⁴See Table D-33 for an explanation of the criteria that were used to designate a COPC as a COC.

Y = Yes, retained as a COC for pore water.

N = No, not retained as a COC for pore water.

U = Uncertain, insufficient data are available to determine if the COPC should be retained as a COC for pore water.

Table D-29. Identification of contaminants of concern (COCs) in the Middle Calcasieu River Area of Concern (MCR AOC) relative to risks to the aquatic plant community due to exposure to surface water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Overall COC ³
<i>Conventionals (mg/L)</i>			
Hydrogen sulfide	ND	ND	ND
Nitrogen, as ammonia	N	N	N
Total dissolved sulfide	ND	U	U
Ammonia - toxic units (no units)	N	N	N
<i>Metals (µg/L)</i>			
Chromium, total	Y	N	N
Chromium, dissolved	Y	N	N
Copper, total	N	Y	N
Copper, dissolved	N	Y	N
Lead, total	N	N	N
Lead, dissolved	N	N	N
Mercury, total	Y	N	N
Mercury, dissolved	N	N	N
Methyl mercury	ND	ND	ND
Nickel, total	Y	Y	Y
Nickel, dissolved	Y	Y	Y
Zinc, total	N	N	N
Zinc, dissolved	N	N	N
<i>Polycyclic Aromatic Hydrocarbons (PAHs; µg/L)</i>			
1,1'-Biphenyl	N	N	N
1-Methylnaphthalene	ND	ND	ND
1-Methylphenanthrene	ND	U	U
2,6-Dimethylnaphthalene	ND	U	U
2-Methylnaphthalene	U	U	U
Acenaphthene	N	N	N
Acenaphthylene	N	U	N
Anthracene	U	U	U
Fluorene	U	U	U
Naphthalene	N	N	N
Phenanthrene	U	U	U
Benz(a)anthracene	U	U	U
Benzo(a)pyrene	U	U	U
Benzo(b)fluoranthene	N	N	N
Benzo(g,h,i)perylene	N	N	N
Benzo(k)fluoranthene	N	N	N
Chrysene	N	N	N
Dibenz(a,h)anthracene	N	N	N

Table D-29. Identification of contaminants of concern (COCs) in the Middle Calcasieu River Area of Concern (MCR AOC) relative to risks to the aquatic plant community due to exposure to surface water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Overall COC ³
<i>PAHs (µg/L; cont.)</i>			
Fluoranthene	N	N	N
Indeno(1,2,3-cd)pyrene	N	N	N
Perylene	ND	U	U
Pyrene	N	N	N
<i>PCB Aroclors (µg/L)</i>			
Aroclor-1016	U	U	U
Aroclor-1221	U	U	U
Aroclor-1232	U	U	U
Aroclor-1242	U	U	U
Aroclor-1248	U	U	U
Aroclor-1254	U	U	U
Aroclor-1260	N	N	N
Total PCBs	U	U	U
<i>Organochlorine Pesticides (µg/L)</i>			
Aldrin	N	N	N
Dieldrin	N	N	N
<i>Phthalates (µg/L)</i>			
Bis(2-ethylhexyl)phthalate	N	Y	N
<i>Chlorinated Benzenes (µg/L)</i>			
Hexachloro-1,3-butadiene	U	U	U
Hexachlorobenzene	N	N	N
1,2,3,4-Tetrachlorobenzene	ND	U	U
1,2,3-Trichlorobenzene	U	U	U
1,2,4,5-Tetrachlorobenzene	ND	ND	ND
1,2,4-Trichlorobenzene	U	U	U
1,2-Dichlorobenzene	U	U	U
1,3-Dichlorobenzene	U	U	U
1,4-Dichlorobenzene	U	U	U
Pentachlorobenzene	ND	ND	ND
<i>Chlorinated Ethanes (µg/L)</i>			
1,1,1-Trichloroethane	N	N	N
1,2-Dichloroethane	N	N	N

Table D-29. Identification of contaminants of concern (COCs) in the Middle Calcasieu River Area of Concern (MCR AOC) relative to risks to the aquatic plant community due to exposure to surface water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Overall COC ³
<i>Other COPCs (µg/L)</i>			
Acetone	N	N	N
Carbon disulfide	U	U	U

ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls;

¹See Table D-12 for a description of the procedures used to evaluate COPC concentrations relative to reference areas.

²See Table D-22 for a description of the procedures used to evaluate COPC concentrations relative to selected toxicity thresholds.

³See Table D-33 for an explanation of the criteria that were used to designate a COPC as a COC.

Y = Yes, retained as a COC for surface water.

N = No, not retained as a COC for surface water.

U = Uncertain, insufficient data are available to determine if the COPC should be retained as a COC for surface water.

Table D-30. Identification of contaminants of concern (COCs) in the Middle Calcasieu River Area of Concern (MCR AOC) relative to risks to the aquatic plant community due to exposure to pore water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Effects/No Effects Distribution ³	Overall COC ⁴
<i>Conventionals (mg/L)</i>				
Hydrogen sulfide	N	Y	N	N
Nitrogen, as ammonia	N	N	N	N
Total dissolved sulfide	Y	U	N	N
Ammonia - toxic units (no units)	N	N	N	N
<i>Metals (µg/L)</i>				
Chromium, total	ND	ND	ND	ND
Chromium, dissolved	ND	ND	ND	ND
Copper, total	N	Y	N	N
Copper, dissolved	N	Y	N	N
Lead, total	N	N	N	N
Lead, dissolved	N	N	N	N
Mercury, total	ND	ND	ND	ND
Mercury, dissolved	ND	ND	ND	ND
Methyl mercury	ND	ND	ND	ND
Nickel, total	N	Y	N	N
Nickel, dissolved	N	Y	N	N
Zinc, total	N	N	N	N
Zinc, dissolved	N	Y	N	N
<i>Polyyclic Aromatic Hydrocarbons (PAHs; µg/L)</i>				
1,1'-Biphenyl	Y	N	N	N
1-Methylnaphthalene	Y	N	N	N
1-Methylphenanthrene	Y	U	Y	U
2,6-Dimethylnaphthalene	Y	U	N	N
2-Methylnaphthalene	Y	N	N	N
Acenaphthene	Y	N	N	N
Acenaphthylene	Y	U	N	N
Anthracene	Y	N	N	N
Fluorene	Y	N	N	N
Naphthalene	Y	N	N	N
Phenanthrene	Y	N	N	N
Benz(a)anthracene	Y	Y	Y	Y
Benzo(a)pyrene	Y	Y	N	N
Benzo(b)fluoranthene	Y	N	N	N
Benzo(g,h,i)perylene	Y	N	N	N
Benzo(k)fluoranthene	Y	N	N	N
Chrysene	Y	N	Y	N
Dibenz(a,h)anthracene	Y	N	N	N
Fluoranthene	Y	N	N	N

Table D-30. Identification of contaminants of concern (COCs) in the Middle Calcasieu River Area of Concern (MCR AOC) relative to risks to the aquatic plant community due to exposure to pore water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Effects/No Effects Distribution ³	Overall COC ⁴
<i>PAHs (µg/L; cont.)</i>				
Indeno(1,2,3-cd)pyrene	Y	N	N	N
Perylene	Y	U	N	N
Pyrene	Y	N	N	N
<i>PCB Aroclors (µg/L)</i>				
Aroclor-1016	U	N	U	N
Aroclor-1221	N	N	N	N
Aroclor-1232	N	N	N	N
Aroclor-1242	N	N	N	N
Aroclor-1248	U	N	U	N
Aroclor-1254	U	N	U	N
Aroclor-1260	N	N	N	N
<i>PCB Congeners (µg/L)</i>				
PCB 105	Y	U	N	N
PCB 118	Y	U	N	N
PCB 128	Y	U	N	N
PCB 132/153	Y	U	N	N
PCB 138/160	Y	U	N	N
PCB 170/190	Y	U	N	N
PCB 18/17	Y	U	N	N
PCB 180	Y	U	N	N
PCB 187	Y	U	N	N
PCB 195/208	Y	U	N	N
PCB 206	Y	U	N	N
PCB 209	N	U	N	N
PCB 28	Y	U	N	N
PCB 29	Y	U	N	N
PCB 44	Y	U	N	N
PCB 5/8	Y	U	N	N
PCB 52	Y	U	N	N
PCB 66	N	U	N	N
PCB 77/110	Y	U	Y	U
PCB 87/115	Y	U	N	N
PCB 90/101	N	U	N	N
PCB 201/157/173	Y	U	N	N
Total PCBs	Y	Y	N	N
<i>Organochlorine Pesticides (µg/L)</i>				
Aldrin	Y	N	N	N
Dieldrin	Y	N	N	N

Table D-30. Identification of contaminants of concern (COCs) in the Middle Calcasieu River Area of Concern (MCR AOC) relative to risks to the aquatic plant community due to exposure to pore water.

Chemicals of Potential Concern (COPCs)	Comparison to Reference ¹	Comparison to Benchmark ²	Effects/No Effects Distribution ³	Overall COC ⁴
<i>Phthalates (µg/L)</i>				
Bis(2-ethylhexyl)phthalate	ND	ND	ND	ND
<i>Chlorinated Benzenes (µg/L)</i>				
Hexachloro-1,3-butadiene	N	N	N	N
Hexachlorobenzene	Y	N	N	N
1,2,3,4-Tetrachlorobenzene	Y	U	N	N
1,2,3-Trichlorobenzene	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	Y	N	N	N
1,2,4-Trichlorobenzene	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
Pentachlorobenzene	Y	N	N	N
<i>Chlorinated Ethanes (µg/L)</i>				
1,1,1-Trichloroethane	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND
<i>Other COPCs (µg/L)</i>				
Acetone	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND

ND = no data (i.e., the substance was not measured at all in the estuary); PCBs = polychlorinated biphenyls.

¹See Table D-13 for a description of the procedures used to evaluate COPC concentrations relative to reference areas.

²See Table D-24 for a description of the procedures used to evaluate COPC concentrations relative to selected toxicity thresholds.

³See Table D-25 for a description of the procedures used to evaluate the distributions of the effects and no effects data.

⁴See Table D-33 for an explanation of the criteria that were used to designate a COPC as a COC.

Y = Yes, retained as a COC for pore water.

N = No, not retained as a COC for pore water.

U = Uncertain, insufficient data are available to determine if the COPC should be retained as a COC for pore water.

Table D-31. Evaluation of the uncertainty associated with the lines of evidence used to assess risks to the aquatic plant community.

Medium	Line of Evidence	Conceptual Model			Exposure Assessment			Effects Assessment							
		Relevance of Exposure Pathway	Relevance of Measurement Endpoint	Conceptual Model Score	Level of Standardization	Quality of Data	Quantity of Data	Exposure Assessment Score	Level of Standardization	Meets Acceptability Criteria	Demonstrated Concentration-Response Relationship	Relevance of Exposure Medium	Level of Validation	Effects Assessment Score	Total Evaluation Score
Surface-Water Chemistry	P-IOT (SW conventional)	3	2	2.5	3	3	1	2.3	NA	NA	1.5	3	1	1.8	2.2
	P-IOT (SW metals)	3	2	2.5	3	3	1	2.3	NA	NA	1.5	3	1	1.8	2.2
	P-IOT (SW organics)	3	2	2.5	3	3	1	2.3	NA	NA	1.5	3	1	1.8	2.2
Pore-Water Chemistry	P-IOT (PW conventional)	1.5	2	1.8	3	3	2.5	2.8	NA	NA	1.5	1.5	1	1.3	2.0
	P-IOT (PW metals)	1.5	2	1.8	3	3	2.5	2.8	NA	NA	1.5	1.5	1	1.3	2.0
	P-IOT (PW organics)	1.5	2	1.8	3	3	2.5	2.8	NA	NA	1.5	1.5	1	1.3	2.0
Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ¹	1.5	3	2.3	NA	NA	NA	NA	1	2.5	2.5	1.5	1	1.7	2.0
	O-MOT (<i>U. fasciata</i> - G)	1.5	3	2.3	NA	NA	NA	NA	1	2.5	2.5	1.5	1	1.7	2.0

Ge or G = germination or growth; G = germination; SW = surface water; PW = pore water; NA = not applicable; P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity.

¹ *U. fasciata* = algae, *Ulva fasciata*.

Table D-32. Summary of risks to aquatic plants estimated from multiple lines of evidence in the Calcasieu Estuary.

Area of Concern (AOC)/Reach	n	Average	Predicted Risk		
		mean	Percent (n) of Samples/Risk Category		
		Risk Score	Low	Indeterminate	High
<i>Upper Calcasieu River AOC</i>					
Upper Calcasieu River - Mainstem	14	0.732	86% (12)	7% (1)	7% (1)
Clooney Island Loop	7	2.10	57% (4)	0% (0)	43% (3)
Contraband Bayou	7	0.893	86% (6)	0% (0)	14% (1)
Coon Island Loop	13	1.61	69% (9)	0% (0)	31% (4)
Overall UCR AOC	41	1.27	76% (31)	2% (1)	22% (9)
<i>Bayou d'Inde AOC</i>					
Upper Bayou d'Inde	10	1.83	60% (6)	0% (0)	40% (4)
Middle Bayou d'Inde	11	1.60	64% (7)	9% (1)	27% (3)
Lower Bayou d'Inde - Mainstem	7	0.857	86% (6)	14% (1)	0% (0)
Lower Bayou d'Inde - Lockport Marsh	18	1.99	56% (10)	6% (1)	39% (7)
PPG Canal	6	3.11	33% (2)	0% (0)	67% (4)
Overall BI AOC	52	1.85	60% (31)	6% (3)	35% (18)
<i>Middle Calcasieu River AOC</i>					
Middle Calcasieu River - Mainstem	10	0.200	90% (9)	10% (1)	0% (0)
Prien Lake and upper old river channel	13	0.410	92% (12)	0% (0)	8% (1)
Indian Wells Lagoon	3	3.19	33% (1)	0% (0)	67% (2)
Bayou Olsen	5	0.533	80% (4)	20% (1)	0% (0)
Moss Lake	6	1.00	83% (5)	0% (0)	17% (1)
Overall MCR AOC	37	0.691	84% (31)	5% (2)	11% (4)
<i>AOC Subtotal</i>	130	1.34	72% (93)	5% (6)	24% (31)
<i>Reference</i>					
Bayou Choupique	4	0.333	100% (4)	0% (0)	0% (0)
Grand Bayou	3	1.78	67% (2)	0% (0)	33% (1)
Bayou Bois Connine	2	2.67	50% (1)	0% (0)	50% (1)
Johnson Bayou	4	0.480	100% (4)	0% (0)	0% (0)
Willow Bayou	2	0.333	100% (2)	0% (0)	0% (0)
Overall Reference Areas	15	0.972	87% (13)	0% (0)	13% (2)
<i>Entire Estuary</i>	145	1.30	73% (106)	4% (6)	23% (33)

n = number of samples.

Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

Table D-33. Biological conditions that occur within the three categories of risk to aquatic plants in the Calcasieu Estuary, identified using the risk designations assigned to each sample.

Plant Metric/Toxicity Test	Endpoint Measured	Low mean ± SD (n)	Indeterminate mean ± SD (n)	High mean ± SD (n)
Pore-Water Toxicity				
<i>Ulva fasciata</i>	Percent Germination	88.3 ± 7.35 (36)	59.5 ± 32.1 (3)	36.6 ± 20.0 (6)
<i>Ulva fasciata</i>	Germling cell number (n)	8.09 ± 2.73 (36)	4.33 ± 3.75 (3)	1.96 ± 1.62 (6)
<i>Ulva fasciata</i>	Germling length (μm)	57.7 ± 15.5 (36)	33.7 ± 26.1 (3)	16.6 ± 13.0 (6)

SD = standard deviation; n = number of samples or germling cells.

Table D-34. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Upper Calcasieu River - Mainstem Reach of the Upper Calcasieu River Area of Concern (UCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00UC1-R1001-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00UC1-R2020-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	0.00		
		P-IOT (SW metals)	2.2	0	0.00		0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00UC1-R2036-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00UC1-R3002-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00UC1-R3006-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	0.00		
		P-IOT (SW metals)	2.2	0	0.00		0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00UC1-R3018-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00UC2-ST001-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00UC2-ST003-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			

Table D-34. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Upper Calcasieu River - Mainstem Reach of the Upper Calcasieu River Area of Concern (UCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00UC2-ST003 (cont.)	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	2	4.00	4.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	2	4.00		2.67	INDETERMINATE
00UC2-ST004-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00UC2-ST005-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		0.67	LOW
00UC2-ST013-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00UC2-ST014-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW
00UC2-ST030-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW
00UC2-ST031-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-35. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Clooney Island Loop Reach of the Upper Calcasieu River Area of Concern (UCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00UC1-R2017-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00UC2-ST007-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00UC2-ST008-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00UC2-ST010-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00UC2-ST011-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		0.67	LOW
00UC2-ST012-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00UC2-ST037-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			

Table D-35. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Clooney Island Loop Reach of the Upper Calcasieu River Area of Concern (UCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00UC2-ST037 (cont.)	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00	0.67	LOW
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00			

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-36. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Contraband Bayou Reach of the Upper Calcasieu River Area of Concern (UCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00UC1-R2001-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00UC2-ST015-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00UC2-ST016-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW
00UC2-ST017-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	2	4.00	4.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	2	4.00		3.33	HIGH
00UC2-ST018-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW
00UC2-ST019-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW

Table D-36. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Contraband Bayou Reach of the Upper Calcasieu River Area of Concern (UCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00UC2-ST020-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth;

U. fasciata = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-37. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Coon Island Loop Reach of the Upper Calcasieu River Area of Concern (UCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00UC2-ST021-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	2	4.00	4.00	3.33	HIGH
		O-MOT (<i>U. fasciata</i> - Ge)	2	2	4.00			
00UC2-ST022-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00UC2-ST023-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00	1.33	LOW
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00			
00UC2-ST024-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW
00UC2-ST025-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00	1.33	LOW
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00			
00UC2-ST026-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH

Table D-37. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Coon Island Loop Reach of the Upper Calcasieu River Area of Concern (UCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00UC2-ST027-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00UC2-ST028-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00UC2-ST029-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
R-1-20-SWB1/3	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	0.00		
		P-IOT (SW metals)	2.2	0	0.00			
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
R-1-20-SWU1/3	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	0.00		
		P-IOT (SW metals)	2.2	0	0.00			
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
R-1-24-SWB1/3	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW

Table D-37. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Coon Island Loop Reach of the Upper Calcasieu River Area of Concern (UCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
R-1-24-SWU1/3	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth;

U. fasciata = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-38. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Upper Bayou d'Inde Reach of the Bayou d'Inde Area of Concern (BI AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00BI1-R4004-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			
00BI1-R4013-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			
00BI1-R4022-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	2	4.40	1.47	1.47	LOW
		P-IOT (SW metals)	2.2	0	0.00			
		P-IOT (SW organics)	2.2	0	0.00			
00BI1-R5004-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW metals)	2.2	0	0.00			
		P-IOT (SW organics)	2.2	0	0.00			
00BI1-R5007-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			
00BI2-ST001-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00BI2-ST002-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67	3.33	HIGH
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	2	4.00	4.00	3.33	HIGH
		O-MOT (<i>U. fasciata</i> - Ge)	2	2	4.00			
00BI2-ST003-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH

Table D-38. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Upper Bayou d'Inde Reach of the Bayou d'Inde Area of Concern (BI AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00BI2-ST004-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00BI2-ST005-NSD2-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-39. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Middle Bayou d'Inde Reach of the Bayou d'Inde Area of Concern (BI AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00BI1-R3003-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			
00BI1-R3013-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	1.47	1.47	LOW
		P-IOT (SW metals)	2.2	0	0.00			
		P-IOT (SW organics)	2.2	2	4.40			
00BI1-R3027-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			
00BI1-R3039-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	2.20	2.20	INDETERMINATE
		P-IOT (SW organics)	2.2	2	4.40			
00BI1-R3051-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW metals)	2.2	0	0.00			
		P-IOT (SW organics)	2.2	0	0.00			
00BI1-R4031-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			
00BI2-ST006-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00	1.33	LOW
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00			
00BI2-ST007-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH

Table D-39. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Middle Bayou d'Inde Reach of the Bayou d'Inde Area of Concern (BI AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00BI2-ST008-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00BI2-ST010-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	2	4.00	4.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	2	4.00		3.33	HIGH
00BI2-ST041-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-40. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Lower Bayou d'Inde - Mainstem Reach of the Bayou d'Inde Area of Concern (BI AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00BI1-R1004-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	1.47		
		P-IOT (SW metals)	2.2	0	0.00			
		P-IOT (SW organics)	2.2	2	4.40		1.47	LOW
00BI1-R1010-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	2.20		
		P-IOT (SW organics)	2.2	2	4.40		2.20	INDETERMINATE
00BI1-R3073-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00BI2-ST024-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00BI2-ST025-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW
00BI2-ST026-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00ECO-014-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW

Table D-40. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Lower Bayou d'Inde - Mainstem Reach of the Bayou d'Inde Area of Concern (BI AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
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P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-41. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Lower Bayou d'Inde - Lockport Marsh Reach of the Bayou d'Inde Area of Concern (BI AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00BI1-R2008-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	2	4.40	1.47		
		P-IOT (SW metals)	2.2	0	0.00			
		P-IOT (SW organics)	2.2	0	0.00		1.47	LOW
00BI1-R2016-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00BI1-R2052-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00BI1-R2058-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00BI1-R2098-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	0.00		
		P-IOT (SW metals)	2.2	0	0.00			
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00BI2-ST012-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		0.67	LOW
00BI2-ST013-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00BI2-ST014-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			

Table D-41. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Lower Bayou d'Inde - Lockport Marsh Reach of the Bayou d'Inde Area of Concern (BI AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00BI2-ST014 (cont.)	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00BI2-ST015-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00BI2-ST016-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	2	4.00	4.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	2	4.00		3.33	HIGH
00BI2-ST017-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00BI2-ST018-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00BI2-ST019-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00BI2-ST020-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	2	4.00	4.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	2	4.00		2.67	INDETERMINATE

Table D-41. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Lower Bayou d'Inde - Lockport Marsh Reach of the Bayou d'Inde Area of Concern (BI AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00BI2-ST021-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00BI2-ST022-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		0.67	LOW
00BI2-ST023-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
99BI1-R2068-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-42. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the PPG Canal Reach of the Bayou d'Inde Area of Concern (BI AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00BI2-ST011-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00BI2-ST027-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00BI2-ST028-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00BI2-ST029-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00BI2-ST030-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00BI2-ST031-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-43. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Middle Calcasieu River - Mainstem Reach of the Middle Calcasieu River Area of Concern (MCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00ECO-007-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			
00LC1-R1003-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			
00LC1-R1015-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			
00LC1-R1024-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			
00LC1-R1036-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW metals)	2.2	0	0.00			
		P-IOT (SW organics)	2.2	0	0.00			
00LC1-R1045-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	2.20	2.20	INDETERMINATE
		P-IOT (SW organics)	2.2	2	4.40			
00LC1-R2039-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW metals)	2.2	0	0.00			
		P-IOT (SW organics)	2.2	0	0.00			
00LC1-R2044-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			
00LC1-R2047-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			

Table D-43. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Middle Calcasieu River - Mainstem Reach of the Middle Calcasieu River Area of Concern (MCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00LC1-R2053-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00			

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth;

U. fasciata = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

Table D-44. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Prien Lake and upper old river channel Reach of the Middle Calcasieu River Area of Concern (MCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00ECO-004-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00	0.00		
00LC1-R2003-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00	0.00		
00LC1-R2010-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00	0.00		
00LC1-R2012-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00	0.00		
00LC1-R2018-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00	0.00		
00LC1-R2020-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00	0.00		
00LC1-R2024-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00	0.00		
00LC1-R2030-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00	0.00		
00LC1-R2033-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00	0.00	LOW
		P-IOT (SW organics)	2.2	0	0.00	0.00		

Table D-44. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Prien Lake and upper old river channel Reach of the Middle Calcasieu River Area of Concern (MCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00LC2-ST001-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		0.67	LOW
00LC2-ST002-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00LC2-ST003-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		0.67	LOW
00LC2-ST004-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-45. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Indian Wells Lagoon Reach of the Middle Calcasieu River Area of Concern (MCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00LC2-ST005-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	2	4.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	2	4.00	4.00	4.00	HIGH
		O-MOT (<i>U. fasciata</i> - Ge)	2	2	4.00			
00LC2-ST006-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00LC2-ST007-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00	1.33	LOW
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00			

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-46. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Bayou Olsen Reach of the Middle Calcasieu River Area of Concern (MCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00LC2-ST008-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW
00LC2-ST009-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	2	4.00			
00LC2-ST009-NSD-010	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		2.00	INDETERMINATE
00LC2-ST010-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW
00LC2-ST011-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
00LC2-ST011-NSD-010	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		0.67	LOW
00LC2-ST012-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-47. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Moss Lake Reach of the Middle Calcasieu River Area of Concern (MCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00LC1-R2058-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00LC1-R2066-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	0.00		
		P-IOT (SW metals)	2.2	0	0.00			
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00LC1-R2070-NSD-010	Surface-Water Chemistry	P-IOT (SW metals)	2.2	0	0.00	0.00		
		P-IOT (SW organics)	2.2	0	0.00		0.00	LOW
00LC2-ST013-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		0.67	LOW
00LC2-ST014-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00LC2-ST027-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

Table D-47. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Moss Lake Reach of the Middle Calcasieu River Area of Concern (MCR AOC).

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
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¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-48. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Bayou Choupique Reach of the Reference Area.

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00SN2-ST012-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00	0.67	LOW
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00			
00SN2-ST013-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW
00SN2-ST014-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00	0.67	LOW
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00			
00SN2-ST015-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-49. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Grand Bayou Reach of the Reference Area.

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00SN2-ST008-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		0.67	LOW
00SN2-ST009-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH
00SN2-ST038-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G)	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		0.67	LOW

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-50. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Bayou Bois Connine Reach of the Reference Area.

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00SN2-ST006-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	2.67		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.33	LOW
00SN2-ST035-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	2	4.00	4.00	4.00	HIGH

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-51. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Johnson Bayou Reach of the Reference Area.

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00ECO-001-NSD-010	Surface-Water Chemistry	P-IOT (SW conventionals)	2.2	0	0.00	0.00		
		P-IOT (SW metals)	2.2	0	0.00		0.00	
		P-IOT (SW organics)	2.2	0	0.00			LOW
00SN2-ST003-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW
00SN2-ST004-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	2	4.00	2.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		1.67	LOW
00SN2-ST005-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.

Table D-52. Final risk scores and overall assessment of risks to aquatic plant communities posed by exposure to surface water and pore water in the Willow Bayou Reach of the Reference Area.

Station	Line of Evidence (LOE)	Measurement Endpoint	TES ¹	Raw Risk Score ²	Endpoint Risk Score ³	Average LOE Risk Score	Final Risk Score (All LOEs)	Overall Risk to the Aquatic Plant Community ⁴
00SN2-ST001-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	0.00	0.00	LOW
00SN2-ST002-NSD-010	Pore-Water Chemistry	P-IOT (PW conventionals)	2	0	0.00	1.33		
		P-IOT (PW metals)	2	2	4.00			
		P-IOT (PW organics)	2	0	0.00			
	Pore-Water Toxicity	O-IOT (<i>U. fasciata</i> - Ge or G) ⁵	2	0	0.00	0.00		
		O-MOT (<i>U. fasciata</i> - Ge)	2	0	0.00		0.67	LOW

P-IOT = predicted incidence of toxicity; O-IOT = observed incidence of toxicity; O-MOT = observed magnitude of toxicity; SW = surface water; PW = pore water; Ge = germination; G = growth; *U. fasciata* = *Ulva fasciata*.

¹TES = Total evaluation score; see Table D-34.

²Refer to Table D-3 for classifications for assessing risks to aquatic plant communities: High Risk is assigned a score of 2; Indeterminate Risk is assigned a score of 1; Low Risk is assigned a score of 0.

³Calculated by multiplying the TES by the Raw Risk Score.

⁴Overall risk of High assigned for samples with a final risk score of >3; overall risk of Indeterminate assigned for samples with a final risk score of 2 - 3; overall risk of Low assigned for samples with a final risk score of 0 to <2.

⁵Based on the toxicity designation determined using the reference envelope approach; toxic samples assigned High Risk; not toxic samples assigned Low Risk.